Retrospective Data Collection
in the
Survey of Health, Ageing and Retirement in Europe

SHARELIFE Methodology

Edited by:
Mathis Schröder

Authors:
Kirsten Alcer
Grant Benson
Annelies G. Blom
Axel Börsch-Supan
Marcel Das
Christelle Garrouste
Heidi Guyer
Christian Hunkler
Thorsten Kneip
Julie Korbmacher
Maurice Martens
Omar Paccagnella
Barbara Schaan
Mathis Schröder
Stephanie Stuck
Arnaud Wijnant
Sabrina Zuber

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Mannheim Research Institute for the Economics of Ageing (MEA)
L13, 17
68131 Mannheim

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Mannheim Research Institute for the Economics of Ageing (MEA)
L13, 17
68131 Mannheim
Tel: +49-621-181-1862
Fax: +49-621-181-1863
www.mea.uni-mannheim.de

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Contents

1 Retrospective Data Collection in the Survey of Health, Ageing and Retirement in Europe

Axel Börsch-Supan and Mathis Schröder

Collecting individual data for social research is one of the essential tasks of the social sciences. Suitable data allow for meaningful policy research, e.g., deriving and evaluating welfare programmes, and therefore help to increase the general wellbeing of individuals. Longitudinal data are especially advantageous because they document changes over time – for example how people move from work into retirement when they become older.

One of the principal difficulties faced by longitudinal surveys is how to deal with the "initial conditions" – the lives of respondents before the baseline year of a survey. This is especially problematic for surveys that start monitoring events at later ages. While sometimes, this problem can be overcome when administrative records are available and can be linked to the survey, many domains of people's lives cannot be linked, as no administrative records exist. In those cases the only realistic option for retrieving such information on the initial conditions is to obtain it directly, albeit retrospectively, from the respondents.

This method has many benefits over regular longitudinal data collection: it is faster, as the respondents give their answers to things that might have happened decades ago. A conventional longitudinal survey would have to wait very long – actually a generation's time – to link the present to those events in the past. This also means that the retrospective data collection is less costly in obtaining the same information. In addition, the risk of respondents dropping out of the study is much smaller than in longitudinal study.

Some drawbacks vis-à-vis prospective data collection are clear: the retrospective data collection may suffer from recall bias, as respondents may err on when an event actually happened, or on how an event exactly took place. Also, less information can be extracted by means of a retrospective data collection because memory fades.

With its third wave of data collection, the Survey of Health, Ageing, and Retirement in Europe, SHARE, combines the two worlds of retrospective and prospective data collection. SHARE is a longitudinal study that started in 11 European countries in 2004, asking about 30,000 respondents aged 50 or older about their contemporaneous living situation. A second wave was fielded in 2006, which included two new countries as well as refresher samples to keep the initial sample size. SHARE covers multiple aspects, reaching from economic variables and demographics to health variables. For more details on SHARE, see the "First Results Books" by Börsch-Supan et al. (2005) and Börsch-Supan et al. (2008), as well as the "Methodology Book" by Börsch-Supan and Jürges (2005).

A central challenge in SHARE has been from the beginning that all sampled individuals are at least 50 years of age, and thus, many of the "initial conditions" – i.e, all experiences during the first 50 years of each respondents' life – are unknown to the researcher. This is especially worrying, since a lot of research has proven the importance of early life events for later life outcomes – be it childhood

health for adult health, parental socio economic status on own financial wellbeing or employment history on pension income.

The third wave of SHARE, called SHARELIFE, has been implemented to collect the retrospective histories of the SHARE respondents. This volume provides the methodological background to the data collection and complements the more substantive analyses in Börsch-Supan et al. (2011). It is meant as a support manual to research activities in which the SHARELIFE data are used. It also documents that the latest advances of methodological research were successfully implemented in the process of this large data collection effort. We cover the technical implementation as well as important issues that surround any data collection effort – e.g. fieldwork monitoring, quality assurance, and data management.

The second chapter, written by *Mathis Schröder,* provides an overview of the literature both with respect to recall errors and ways to overcome them. The topics of the SHARELFE study are then briefly discussed in this context.

The third chapter shows how the (electronic) implementation of previous research was achieved in a large field study such as SHARELIFE. *Marcel Das, Maurice Martens, and Arnaud Wijnant* give a programmers' look at problems in the development of a survey instrument and show the different requirements a CAPI programme needs to fulfil.

The fourth chapter shows how the fieldwork was done during the field phase. This chapter, written by *Barbara Schaan,* presents how the technical achievements – especially the sample management system – connects to the coordination of SHARE's thirteen countries and fourteen survey agencies.

The provision and implementation of certain quality standards is another essential part of the operation. In chapter five, *Kirsten Alcer, Heidi Guyer, and Grant Benson* provide some background and an overview of the results of implementing the first quality profile in SHARE, which was used to achieve a common and comparable quality standard in data collection across all countries.

Data collection in SHARELIFE not only implied more than 1,000 interviewers in contact with more than 25,000 people, but also brings about a tremendous amount of data management work. In chapter six, *Christian Hunkler, Thorsten Kneip, Julie Korbmacher, Stephanie Stuck and Sabrina Zuber* document the processes from SHARE's raw data, coming directly from the field, until the moment the final data used by the research community are released.

Chapter seven then provides an overview of the first important results – the survey participation. *Annelies Blom and Mathis Schröder* explore how the countries differ in their participation rate both on an individual and on a household level. They look at determinants of participation such as gender and age, but also show how previous participation of individuals affects current participation.

The eighth chapter gives a first very brief look at the quality of the data, where *Christelle Garrouste and Omar Paccagnella* are concerned with the congruency of the earlier two SHARE waves with the retrospective information collected in SHARELIFE. They exemplify their analysis by reporting on three variables which are collected both in SHARELIFE and in SHARE's wave 1 and

2. The differences they find are contributed to various circumstances – not the last being the fact, that questions are asked differently across waves, and hence the measurement of difference may not be perfect. However, they conclude that the data are of good quality.

Finally, this book contains an important detail for the researcher – the appendix with the actual questionnaire. While the questions are shown in their English version, of course each country had a specific language version, sometimes even more than one. In addition, the flow of questions, with their respective filtering, is also provided in graphical form, and may help researchers in understanding how the interview situation itself took place. It should be noted, that the website (www.sharelife-project.org) provides all information provided in this book and more – for example country specific questionnaires, latest results and, even more important, the actual data for download.

We hope that with this book, those familiar with the Survey of Health, Ageing and Retirement in Europe find a valuable extension to their already existing research agenda. To those new to SHARE, we hope that SHARELIFE provides an exciting input and inspiration to join the growing community of SHARE users.

Acknowledgements

Thanks belong first and foremost to the participants of this study. None of the work presented here and in the future would have been possible without their support, time, and patience. It is their answers which allow us to sketch solutions to some of the most daunting problems of ageing societies. The editors and researchers of this book are aware that the trust given by our respondents entails the responsibility to use the data with the utmost care and scrutiny.
Collecting these data has been possible through a sequence of contracts by the European Commission and the U.S. National Institute on Aging, as well as support by many of the member states.

The SHARE data collection has been primarily funded by the European Commission through the 5th framework programme (project QLK6-CT-2001-00360 in the thematic programme Quality of Life). Further support by the European Commission through the 6th framework programme (projects SHARE-I3, RII-CT-2006-062193, as an Integrated Infrastructure Initiative, COMPARE, CIT5-CT-2005-028857, as a project in Priority 7, Citizens and Governance in a Knowledge Based Society, and SHARE-LIFE (No 028812 CIT4)) and through the 7th framework programme (SHARE-PREP (No 211909) and SHARE-LEAP (No 227822)) is gratefully acknowledged. We thank, in alphabetical order, Giulia Amaducci, Kevin McCarthy, Hervé Pero, Ian Perry, Robert-Jan Smits, Dominik Sobczak and Maria Theofilatou in DG Research for their continuing support of SHARE. We are also grateful for the support by DG Employment, Social Affairs, and Equal Opportunities through Georg Fischer, Ruth Paserman, Fritz von Nordheim, and Jérôme Vignon, and by DG Economic and Financial Affairs through Declan Costello, Bartosz Pzrywara and Klaus Regling.

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SHARELIFE was a different type of survey than the previous two rounds of interviews, requiring new technologies to be developed and used. Programming and software development for the SHARELIFE survey was done by CentERdata at Tilburg. We want to thank Alerk Amin, Maarten Brouwer, Marcel Das, Maurice Martens, Corrie Vis, Bas Weerman, Erwin Werkers, and Arnaud Wijnant for their support, patience and time. Kirsten Alcser, Grant Benson, and Heidi Guyer at the Survey Research Center (SRC) of the University of Michigan Ann Arbor again provided the Train-the-Trainer programme for SHARELIFE, and invested tremendous amounts of time and work to develop the prototype of a quality profile for the data collection, which included visiting the sites of the national interviewer trainings in participating countries. Kate Cox, Elisabeth Hacker, and Carli Lessof from the National Centre for Social Research (NatCen) gave helpful input in designing the questionnaire and pointed out the retrospective specifics in the interview process. We always kept in close contact with the professional survey agencies – IFES (AT), PSBH, Univ. de Liège (BE), Link (CH), SC&C (CZ), Infas (DE), SFI Survey (DK), Demoscopia (ES), INSEE (FR), KAPA Research (GR), DOXA (IT), TNS NIPO (NL), TNS OBOP (PL), and Intervjubolaget (SE) – and thank their representatives for a fruitful cooperation. Especially the work of the more than 1000 interviewers across Europe was essential to this project.

The innovations of SHARE rest on many shoulders. The combination of an interdisciplinary focus and a longitudinal approach has made the English Longitudinal Survey on Ageing (ELSA) and the US Health and Retirement Study (HRS) our main role models. Input into the concepts of retrospective questionnaires came from Robert Belli and David Blane. The life history questionnaire has been implemented first in the ELSA study, and without the help of people involved there (James Banks, Carli Lessof, Michael Marmot and James

Nazroo), SHARELIFE could not have been created in such a short time. SHARELIFE has also greatly profited from detailed advice given by Michael Hurd, Jim Smith, David Weir and Bob Willis from the HRS as well as by the members of the SHARE scientific monitoring board: Orazio Attanasio, Lisa Berkman, Nicholas Christakis, Mick Couper, Michael Hurd, Daniel McFadden, Norbert Schwarz and Andrew Steptoe, chaired by Arie Kapteyn. Without their intellectual and practical advice, and their continuing encouragement and support, SHARE would not be where it is now.

Since SHARELIFE was an entirely newly designed questionnaire, the work of developing and constructing the questions was immense. We are very grateful to the contributions of the eight working groups involved in this process. Specifically, Agar Brugiavini, Lisa Calligaro, Enrica Croda, Giacomo Pasini, and Elisabetta Trevisan developed the module for financial incentives of pension systems. Johannes Siegrist and Morten Wahrendorf provided input for the module on quality of work and retirement. The development of questions for the part of disability insurance and labour force participation of older workers was responsibility of Hendrik Jürges, whereas the health and retirement section was constructed by Johan Mackenbach and Mauricio Avendano. Preventive care, health services utilisation, and retirement fell into the realm of Brigitte Santos-Eggimann and Sarah Cornaz, and Karsten Hank provided his input for the gender, family, and retirement section. Wealth and retirement questions were designed by Guglielmo Weber and Omar Paccagnella, and finally, questions on health risk, health insurance, and saving for retirement were integrated by Tullio Japelli and Dimitri Christelis.

A large enterprise with 150 researchers in thirteen countries entails also a large amount of day-to-day work, which is easily understated. We would like to thank Kathrin Axt, Maria Dauer, Marie-Louise Kemperman, Tatjana Schäffner, and Eva Schneider at the MEA in Mannheim for their administrative support throughout various phases of the project. Annelies Blom, Martina Brandt, Karsten Hank, Hendrik Jürges, Dörte Naumann, and Mathis Schröder provided the backbone work in coordinating, developing, and organizing the SHARELIFE project. Preparing the data files for the fieldwork, monitoring the survey agencies, testing the data for errors and consistency are all tasks which are essential to this project. The authors and editors are grateful to Christian Hunkler, Thorsten Kneip, Julie Korbmacher, Barbara Schaan, Stephanie Stuck, and Sabrina Zuber for data cleaning and monitoring services at the MEA in Mannheim, and Guiseppe de Luca and Dimitri Christelis for weight calculations and imputations in Padua, Salerno and Venice. Thorsten Kneip and Marco Hambuch provided the essentials for the flowcharts and the questionnaire representation in this book, while Elisa Sept was responsible for the design work around the book.

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2 Concepts and Topics

Mathis Schröder

2.1 Introduction

As mentioned in the introduction to this book, one of the principal difficulties faced by longitudinal surveys such as the Survey of Health, Ageing and Retirement in Europe (SHARE) concerns how to deal with "initial conditions" – the lives of respondents before the baseline year of a survey. Due to the lack of better options, the only realistic way for retrieving past information in certain domains is to obtain the information directly from the respondents. However, people do not reproduce events from the past flawlessly (Rubin, 1996), and the characteristics of the individual, the type of data collected and the period of recall all influence the accuracy of recall (Rubin and Baddeley, 1989; Sudman and Bradburn, 1973). An improved understanding of the nature of memory has been important in developing data collection techniques that improve accuracy of recall. Belli (1998) explains that "memories are thematically and temporally structured within a hierarchical ordering".

In the following sections, this chapter documents the path from the literature on recall error and ways to improve recall in data collection efforts to the point of the electronic implementation for the SHARELIFE study.

2.2 Recall error in retrospective data collection – some evidence

In any survey the main issue of answering questions, retrospective or not, is accuracy. Most socio-economic surveys have a retrospective component to them, for example when asking about events that happened in the last year or when collecting information on the frequencies of events. That there is room to improve accuracy in retrospective surveys has been shown in many studies across different subjects. In the following, several examples of known issues are illustrated and briefly discussed.

Peters (1988) uses the National Longitudinal Survey of Work Experience (NLS), a panel that started in 1966. As marital status – and thus changes in it – is recorded each year, she can construct a marriage history for her study group of young women. In 1978 and in 1983, the women are asked about their last three marriages, which gives the opportunity to compare the retrospectively collected data with the ongoing records of marital history. Taking the "at-the-time" recordings as the true data, Peters finds a concordance of between the panel and the retrospective data of 76%. The underlying recall period is at the maximum fifteen years, with a mean distance between interview and event of slightly more than five years. When looking at the determinants of this recall error, she finds that the recall is reduced by 3-4% per year. In addition, education is reducing recall error.

Auriat (2000) studies moving histories. The retrospective data source is a survey of couples in Belgium, who are asked separately and as a couple about their residential changes from when they were 14 years old. As they are between 41 and 57 years old at the time of the interview, there are a potentially large number of moves to report. The comparison data come from the Belgium National Population Register, where all moves have to be reported to within 8 days of changing the address. Auriat sets the error margin to three months: if the reported move date is within three months of the official move date, there is no error. Considering at most the first three moves after marriage, she finds that at least 30% are off by more than 3 months. Quite interestingly, however, she finds that if the reports are wrong, respondents miss the mark by yearly amounts, i.e. the difference to the true date is by multiples of 12 months rather than by any other difference. This is attributed to memories of the season, in which the move happened. She finds little evidence that time since event matters, which might be an effect of the moves all being long ago.

Mathiowitz and Duncan (1988) use the PSID in 1983 to assess the accuracy of retrospectively collected unemployment information. The respondents are asked about their monthly unemployment history in the previous two calendar years. From this, an indicator of "any unemployment" is generated in combination with the detailed unemployment history up to the interview. The employment records of a large firm are used to validate this information. A look at the indicator yields corresponding answers in 89% of the data – i.e., 89% of respondents indeed had an unemployment period if they reported it in the PSID and vice versa. However, the duration of unemployment is often misreported: specifically spells with a short duration of 12 weeks or less are omitted by the respondents in more than 50% of the time, and still 37% of spells that last 29 weeks or longer are not reported. Interestingly, time since the event is not related to the recall error, maybe an effect of the short time period considered here.

A study related to health by Means et al (1989) was done for the US department of Health and Human Services. They collect data on doctor visits for any health condition over the last 12 months, and compare the reported visits to those in the actual medical records. Only about 41% of all visits are recalled, and, interestingly, the seriousness of the condition does not matter in terms of recall. Recurring events, i.e. those where the respondent had to come back for the same condition, were recalled with less precision: visits for the same condition that led to three or more visits are each less accurately recalled than less frequent ones, with a margin of 21 percentage points, or 32 vs. 53%.

There has also been an effort to test the memory of public events, done by Gaskell et al (2000) in the United Kingdom. In this study, people were asked to remember two public events: Margaret Thatcher's resignation, which at the time of the interview had been 19 months ago, and the Hillsborough football disaster, 37 months ago at the time of the interview. Correct responses were relatively few, only 15% of respondents recalled the exact year and month of the resignation, whereas 10% were able to exactly date the football disaster. Given the previous examples, this hints at the possibility, that public events are less accurately remembered than events in respondents' personal histories.

These examples show that there is evidence of recall bias in various topics, although there are differences among the topics in terms of how easy things are forgotten. Personal moves are much better recalled than visits to the doctor, for example, especially when considering the differences in time horizon in these studies. This leads to the very intuitive point that events that are more important in a respondent's life are more easily remembered.

This hypothesis of a saliency effect is tested in two studies by Akerlof and Yellen (1985) and Jürges (2007), which both look at the correct report of unemployment spells that had happened a year prior to the interview, dependent on the impact this had at the time on the respondent's life. While Akerlof and Yellen measure the impact indirectly, Jürges uses the reported life satisfaction to explain recall bias. Both studies find that the more important the event was at the time, the more accurate it is remembered later. However, this is of little practical purpose, as it is unknown to the researcher, what are the salient events in a person's life.

Given this brief overview – see some more evidence in Chapter 8 – it is clear that respondents need support when they are supposed to in remember their past accurately. We report on the measures developed in the literature in the following section.

2.3 Improving recall in retrospective data collection

Before considering how to improve retrospective data practically, one must think about how memory functions. Relevant for retrieving past events and thus remembering is our so-called autobiographical memory. Theoretical research in cognitive psychology has proposed three main categories of autobiographical memory (see Conway, 1996): *event specific knowledge*, consisting of memories of a particular moment or short period of time such as the event of a car accident or a specific birthday celebration; *general events*, relating to certain periods in one's life, such as a vacation in a specific country or the work for a certain company; finally there are *lifetime periods*, the major periods in one's life, such as childhood, early motherhood, time spent in education, etc.

In our setting of retrospective data collection all of these memories are of interest – we would like to know about lifetime periods, asking generally about a person's working life or the time thereafter. We also are interested in general events, when we ask about a certain job or the time spent in a certain accommodation. Finally, the event specific knowledge plays also a role, when we ask the respondents to recollect memories of health problems or what specifically happened to them during times of persecution.

There are several intuitive ways to improve the recall of an event itself, which have been shown to make a significant difference in recall. Several studies have shown that remembering events is more likely the longer people have time to think about the question. For example, Cannel et al (1977) report that adding meaningless parts to the question increases accuracy at least for educated respondents (with no significant effects for less educated people). Similarly, Loftus et al. (1990) reduce the number of misreports by asking the same question

twice and varying the reference period. Explicitly asking for more effort from the respondent has been shown to increase recall as well (Cannel et al, 1981). However, these approaches are not necessarily suitable for a project like SHARELIFE – interviewers would feel awkward to ask the same question twice for example, and respondents would wonder why a certain question is said to be more important than another one. In addition it is hard to judge whether an event did not happen or the respondent does not remember it, and thus the countermeasures are hard to implement.

If the event in question is remembered, dating accuracy is most important. This is also important for SHARELIFE, as we are interested in precise data. Again, there are some intuitive ways, but also some more elaborate possibilities have been developed in the field. Immediately obvious is the restriction to time periods that are recent – stemming from the results that events that are further back in time are usually less accurately remembered than things that happened more recently. Findings on changing the recall order (i.e. backward, forward or "free recall") are mixed and suggest that the effects of recall order depend on the subject. For example, Jobe et al. (1990), find that free recall provides more accurate results when asking about household health care visits, whereas Loftus et al. (1992) find no significant effect for recall order when asking about visits to health maintenance organizations (HMO). Another option is "bounded recall" – an artificial restriction of the reference period that has been shown to increase accuracy (e.g. Neter and Waksberg, 1964; or Auriat, 1993). Bounded recall can be especially useful in a panel study, where the time between two interviews is naturally defined as the reference period. At the time of the second interview the respondent is reminded of his or her answer given in the first, and then asked to report any changes that happened since. But the reference period can also be restricted to other periods of the respondent's life – for instance to lifetime periods or extended events in the terminology used above. For example, one would ask the respondent to think of his/her childhood and then ask specific questions about it.

Another form of bounded recall is the use of "temporal landmarks", which hinges on the idea that there are certain events in one's life that are outstanding – personal events such as the birth of a child or marriage, but also some public events, such as the assassination of J. F. Kennedy or the win of one's national team in a big sports competition. These events, once they are known, can be used to anchor the respondent's memory and place other personal events relatively to the landmark: the respondent might not know when exactly something happened, but if she knows it was in the year when people landed on the moon, this information can help.

Several studies have tested the use of public landmarks. For example, Loftus and Marburger (1983) use the eruption of Mt. St. Helens in Washington State. Six months after this event, they ask about crime victimization, using either "in the last six months" or "since the eruption of St. Helens" as an entry to the question. They find that the inclusion of landmarks increases the accuracy of the reports.

Besides changing the type or the content of questions, graphical devices have been shown to improve data quality as well. The simplest way here is the use of

timelines, where the respondent is asked to record life events on an axis, and then place other events accordingly around it. This one-dimensional version has been extended to a life grid or calendar with the use of Event History Calendars (EHC), as described by Freedman et al. (1988), Blane (1996), or Belli (1998). The idea is similar to that of timelines, just on multiple dimensions. When going through a questionnaire, life events are recorded into a large grid, where a set of topics such as children, partners, or work are combined with the time dimension, which is usually on the horizontal. The calendar then allows the respondent to see important events of different areas of her life in parallel. Belli (1998) argues that the EHC enhances the respondent's ability to recall, as standard recall mechanisms, which relate back to the types of memories mentioned above, are triggered by this approach. These mechanisms or associations are threefold, all of which are supported by the EHC:

1. Top-down retrieval, meaning that a higher order structure indexing allows moving into lower order structures, or similar, the memory moves from general structures to specific ones. In the framework of the above memory types, one would move from lifetime periods to general events to event specific knowledge. For the implementation in a survey, this suggests to specify large topics first, and then move within these topics to the more specific events.
2. Within a theme, events are ordered along the time dimension and can therefore be recalled sequentially. In designing a questionnaire, one would implement this strategy when asking about recurring events – for example when asking about the different houses a person lived in, one would start with the first (or the last), and then move forward (or backward) along the time dimension.
3. Across themes, recall happens in parallel, meaning that one event can trigger the memory of a different theme because it happened in the same time episode. For survey design, this proposes to somehow visualize to the respondent his or her answers, such that a parallel retrieval is possible – for example, a marriage may coincide with a certain job period.

As Schwarz and Oyserman (2001) suggest, EHCs improve recall by making use of several of the other approaches mentioned above. One clearly is the use of landmarks, as during the process of filling the calendar, the interviewer can always prompt by using previously entered events, for example the birth of children. But also public landmarks can be used very easily, if the interviewer has a possibility to refer to them. The calendar is in principle also open in terms of the order in which it is filled – as long as the questions are asked flexible enough, the topics do not need to be followed in a specific order. An additional feature is that the calendar allows both the respondent and the interviewer to easily cross-check events and correct errors that otherwise would have remained undetected.

The first EHC has been implemented by Freedman et al. (1988) in a pen and paper version. They used this technique in a sample of nine hundred 23 year olds, who were asked in detail about life events that had happened since their 15^{th} birthday. Events were entered on a monthly basis, so overall, 120 entries were possible for each of the possible categories. Since this was done on paper, even

though a lot of categories were included, the scope of the questionnaire accompanying the calendar was rather limited.

Belli et al. (2005) experimented with a life history for the Panel Study of Income Dynamics (PSID). The PSID meant to test the life history approach to see if recall could be improved with this technique compared to a regular q-list interview. The implementation was a computerized instrument done by a telephone interview, so the respondent did not have access to the calendar, but the calendar rather served as an input device for the interviewer. However, the interview itself was very flexible: Instead of asking direct questions, the interviewers were asked to simply give broad questions that would lead to the topics the researchers were interested in. This would guarantee that the respondent truly remembered events. However, this approach is very limited if the researcher is interested in things the respondent cannot be "steered" towards.

The English Longitudinal Study of Ageing (ELSA) implemented a face-to-face interview with an EHC in their study in 2007 (Scholes et al., 2009). As ELSA is very closely related to SHARE, the life history approach serves as a role model for SHARELIFE. The main reason for ELSA to use a life history approach is the same as in SHARELIFE: since all of the respondents are at least 50 years old, the initial conditions for the respondents are not observed. Especially for health and socio-economic status, researchers would be very interested in the respondents past to relate it to the present. In this regard, the life history approach was meant to collect very important unobserved variables.

ELSA covered several areas of retrospective data: health, economics and social networks from early childhood, which were followed then by experiences through adulthood. A lot of development went into the implementation of the instrument, which started out as a very flexible type of interview, similar to the PSID experiment done by Belli et al (2001). However, throughout the course of pre-tests and pilot studies, the study moved from a flexible pen-and-paper combined interview to a more standard way of questioning with a life grid as a supplement to the interview. It is this computerized version of the life history interview that serves as the basis for the SHARELIFE interview described in detail below.

2.4 Overview of Topics

SHARELIFE is meant to analyze the European welfare state by comparing individual decisions across time and countries and connecting these decisions with the institutional surroundings that people faced at the time. This implies a somewhat standardized interview which guarantees the comparability not only within a country but also across the European boundaries. In addition, the face-to-face interviews from the first two waves of SHARE were meant to be continued. These considerations led to the decision not to use a fully flexible approach as taken by Belli et al. (2005) but rather base the life history interview on an approach similar to the English Longitudinal Study of Ageing. This has the additional benefit that ELSA and SHARELIFE are collecting data in a very similar way, allowing researchers to combine the two on numerous dimensions.

There are several different modules to the SHARELIFE interview, which are ordered according to what is usually most important to the respondent and thus remembered most accurately. Although there is a default order, a flexible approach is allowed in the sense that the interviewer can change to any module at any point in time if necessary.

The interview starts in default order with questions about the children, i.e. year of birth of the oldest child, his or her name, gender, etc. Immediately, this information appears in the calendar for both the respondent and the interviewer to see, so that the interviewer has an easy way of linking questions to personal events (in this case, children). The child section is followed by the module about the partner history, which asks about marriages, cohabitating partners as well as about other important relationships. Again, the main information like the start and end of a relationship is displayed on the screen. The places of living are recorded in the following section, where the previously recorded life events prove to be very helpful: interviewers can prompt with that information, e.g. “Did you live there after your second child was born?” or “Were you still with X when you moved?”. This anchoring gives tremendous help to the respondent.

This is followed by a section about the respondent’s living situation when he or she was ten years old. This detailed look at one point in the respondent’s childhood provides useful information about where our respondents come from, as some of these variables prove to be good predictors of socio-economic status later in life. None of the parts of this section appear in the calendar, since the information is too detailed and only concerns this one point in time. This is different for the work section, which follows. This is one of the very detailed sections, where questions are asked about the respondent’s job and retirement history. Not only jobs are covered in detail, but also any periods of not working, be it due to unemployment, maternity or retirement. The work module is followed by a brief section about the use of financial assets during the respondent’s life, where mainly the entry points are of interest.

The next two sections cover health, where the first one is about health status as a child and as an adult, and the second is about health care with a strong focus on the use of preventive medicine in a respondent’s life. These sections allow identifying differences in the actual health and health care use throughout Europe, which are important determinants of the welfare state. The final section of the interview is then covering general life events, where the respondents are asked to identify specific periods of their live, e.g. when they were happier or when they had to endure financial hardship. One important decision here was to include a special section on persecution, even though it may have affected only few of our respondents.

2.5 Summary

While the literature in the second section of this chapter has shown that there are many challenges in collecting retrospective data, the third section has provided good examples that there are multiple ways to rise to the occasion. Indeed, the field has greatly advanced in the past twenty or so years, which now – with the

latest technology available – are possible to implement in actual ongoing studies such as ELSA or SHARELIFE. These studies themselves then test advances on a large scale and thus can contribute to the development of new techniques to the benefit of future studies.

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3 Survey Instruments in SHARELIFE

Marcel Das, Maurice Martens and Arnaud Wijnant

3.1 Electronic interview implementation

As Chapter 2 has laid the ground, this chapter turns to the actual implementation of the survey content into the SHARELIFE study. The SHARELIFE questionnaire differed in many ways from the questionnaires that were used in the two previous waves of SHARE. Questions and routing were completely different. In addition, there was the need to graphically display the Event History Calendar (EHC). This had an impact on the interface design as well as choice of software. The architecture was largely taken from ELSA, which used the EHC method before. All survey instruments in SHARELIFE were programmed by CentERdata, a research institute housed on the campus of Tilburg University, the Netherlands. The previous waves used the computer-assisted interviewing system Blaise, developed for the Windows operating system by Statistics Netherlands and designed for use in official statistics. Although SHARELIFE also made use of Blaise as questionnaire engine, it was decided to replace the default data entry programme used to display questionnaires written in Blaise by a new programme.

As in the two previous waves, the CAPI (Computer Assisted Programming Interview) application had a generic structure in terms of routing and setup. The main SHARE concept of *ex-ante harmonization* of the survey instrument was not changed. Only the language of the question texts, interviewer instructions and answer categories differed by country, while the generic questionnaire, basis for all countries, was in English. Translations of texts and the events could be entered in the Language Management Utility (LMU), which was originally designed for SHARE wave 1 (see Das et al., 2005) and updated for wave 2 (see Brouwer et al., 2008). Further fine-tuning happened for SHARELIFE, not only concerning the stability and handling of the LMU, but also some specialized sections were added to support the EHC.

The EHC CAPI application contained one additional country-specific element. The application had a “look up” area where one could search for general country-specific events, allowing the respondent to use landmark anchoring as discussed above. The events were specified directly by the country teams, covering occurrences that were commonly thought to be remembered by respondents and serving as a reference point. The events were grouped in social, economic, political, sports, natural and other events.

The EHC CAPI application enabled the interviewer to gather detailed information about important (personal) events in the respondents’ lives. The individual’s history of events was then shown on the screen. The graphical display of the calendar grid, the “look up” area for general events, and the display of the individual events required a different Data Entry Programme (DEP) than the default Blaise DEP. As the interface that the interviewer uses to go through the questionnaire is important for the success of the whole project, it was decided to

implement a new DEP in Visual Basic that could communicate with a compiled Blaise questionnaire. Figure 3.1 displays the DEP as it was used in SHARELIFE.

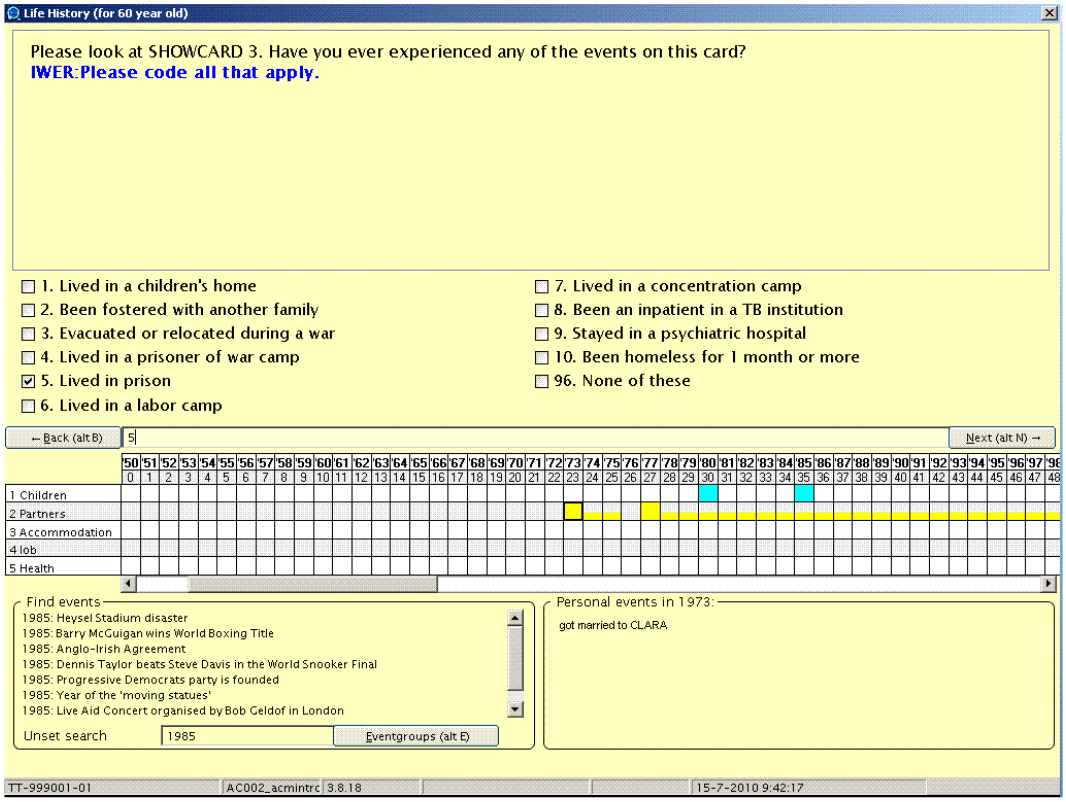

Figure 3.1: Screenshot of Data Entry Programme as used in SHARELIFE

The DEP-screen shown in Figure 3.1 is divided into six parts. On top is the question part, where the current text the interviewer is supposed to read out is placed in black font while interviewer instructions are set in bold and blue font. Below are the answer categories that are possible for this question – this part is empty if it is an open question and there is text to be entered. The answers can either be clicked on with the mouse, or they can be typed into the answer line below the answer categories, where also open questions are answered.

Below the answer line is the main new feature of the instrument, the calendar, displaying the timing of each of the life history events or modules. The following five "key events" in life were displayed vertically: children, partners, accommodation, job, and health. The top of the calendar section displays each year of the respondent's life with his/her corresponding age, starting from the year the respondent was born. (The respondent was asked for his/her date of birth at the beginning of the interview.) Cells were colored when certain events occurred in the specific year and module. As mentioned in Chapter 2, it was possible during the interview to quickly jump to questions previously answered in a different module. As can be seen in the screenshot, some personal events already have

already been entered for this respondent, for example two children in the first line, and two relationships in the second.

The “personal events” box on the lower right hand side of the DEP field is filled while going through the questionnaire. If the interviewer selected a cell in the calendar grid, a description of the personal events that occurred in the selected year was displayed. The events list corresponds directly to the filled squares in the calendar and serves as a tool to get more details about the event in the calendar. In Figure 3.1, the marker in the calendar is set to “1973”, in which the coloured square shows that the respondent started a relationship. Looking at the “Personal Events” box, the interviewer could see that it was actually the marriage with Clara which began in 1973.

Below the calendar on the lower left hand side is the field labelled “Find events”. Whenever a respondent could not remember the exact year in which a particular event happened, but knew it was around the time that some general event occurred, this search tool could be used. Country-specific events could be added by the country team; a basic list of events was derived from Wikipedia for each country separately.

This search tool is a completely new development for SHARELIFE. Before this implementation, the respondents had a list of events for each year, but here the problem was that either the interviewer or the respondent had to have the knowledge of when an event had happened for these lists to be useful. For example, if the respondent remembered that her move was a month after J. F. Kennedy was shot, then this does not help if neither she nor the interviewer knew when that happened. So this led to searches for events, which cost time and was at times frustrating for both the interviewer and the respondent. The new search tool provides a solution for this, because the interviewer can search for a specific event, as shown in Figure 3.2:

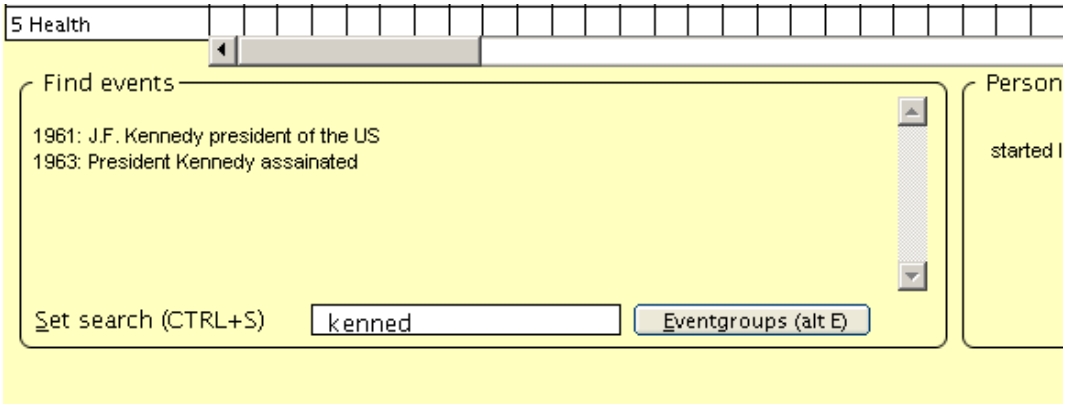

Figure 3.2: Screenshot of Search Tool

Here the interviewer entered “kenned” and a list of events that contain this string appears in the box. The current example shows two events, the inauguration and the assassination of J. F. Kennedy. In a similar way (see Figure 3.1), the

interviewer could enter a year, and then all events of that year appeared in the "Find events" box.

The electronic implementation of the Event History Calendar proved to be a successful tool in the end – both interviewers and respondents provided useful feedback for improvements during the testing phase. Not all respondents took interest in the graphical representation of their lives, but many of them actually asked to have a printout of the screen after the interview.

3.2 Sample management

With more than 30,000 cases to handle, a survey like SHARELIFE needs an efficient way to manage the sample electronically, especially if this sample is distributed across thirteen different countries and fourteen different survey agencies in Europe. CentERdata developed the SHARE Sample Management System (SMS) for SHARE's previous waves (see also Das et al, 2005, and Brouwer, 2008), and programmed a major upgrade for SHARELIFE. The system consists of two main components:

- a Sample Distributor (SD) installed on a server at each survey agency
- a Sample Management System (SMS Client) installed on the each interviewer's laptop

Both components were programmed in Java, an object-oriented and platform-independent programming language that, in terms of syntax, is largely based on the programming language C++. Both the SD and SMS Client have a similar user interface. The SD was created to monitor the complete fieldwork in a country (see also Chapter 4), to distribute the sample among these laptops in the fieldwork, and to gather the data from the laptops in the field. The SMS Client was used to record contacts, to decide who to interview, and to start the actual interviewing. An overview of how the two components work together is shown in Figure 3.3.

In contrast to SHARE wave 2, the SD and the SMS Client were the only means of accessing the data during the fieldwork. This means that corrections on the data were only possible via these programmes or via programmers at CentERdata who could create correction files which could be either loaded in the SD or the SMS Client application. This design-decision contributed to a harmonized data-processing procedure, enabling CentERdata to deliver the data of more than 30,000 interviews in thirteen countries in a reasonable short amount of time.

Another major change in the management software used in SHARELIFE was the introduction of a feature to make a copy of the household state after every action in one of the two components. This copy could always be used to go back to a previous state if any mistake was made. This mechanism also made it possible to track what happened to a household or respondent over time in order to analyze difficulties during the fieldwork.

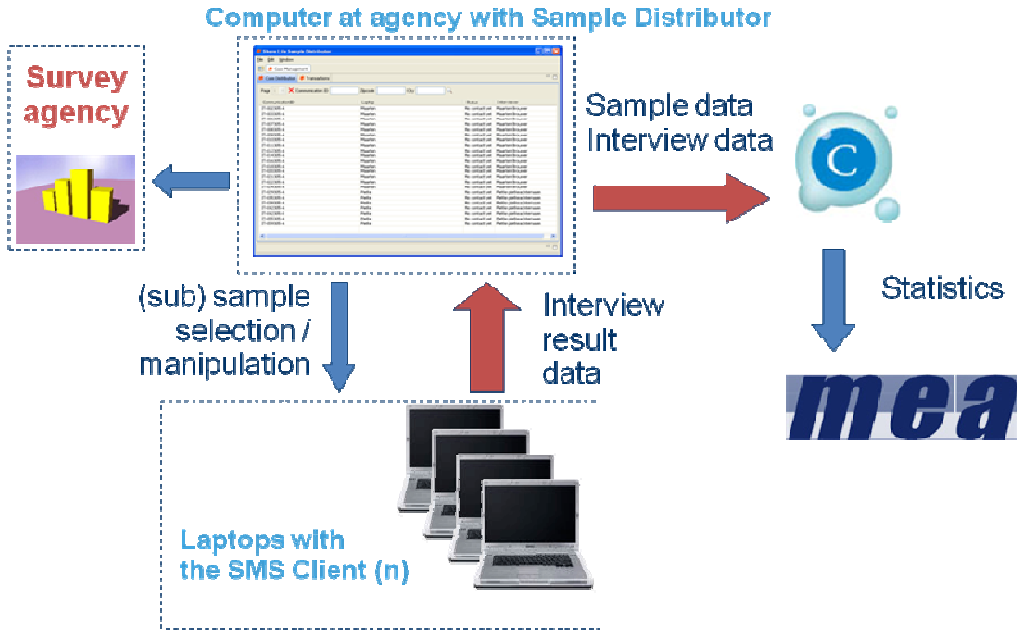

Figure 3.3: Relations between the Sample Distributor and SMS Client

Coverscreen wizard

The interview starts with a "coverscreen" that offers an introduction to the study and collects basic demographic information about everyone currently living in the household. The coverscreen establishes which household members are eligible to participate in SHARELFE. In SHARELFE a coverscreen wizard was used, which replaced the Blaise coverscreen interview for respondents who did not object to re-using data from an interview in a previous wave. Unlike the Blaise coverscreen, the coverscreen wizard is fully integrated in the SMS Client application, which has several advantages:

The first advantage is that the wizard has full access to the data stored for the sample as it was collected in the previous waves. With this information the wizard can check if there are any changes in the household-composition. The wizards helps the interviewer to determine whether a person's name and birthday are still correct, whether relations within the household are still as in previous waves, and whether people have deceased/moved out. The wizard also checks whether any new persons have joined the household.

The second advantage is that the wizard is able to correct the sample data inside the SMS Client application. New households can be created if a split-off (e.g. due to a divorce) occurs, names and birthdays can be corrected, but also new respondents (e.g. new partners of a previous respondent) can be added to the household. Household addresses can also be changed via the coverscreen wizard, if a whole household moved to a new address.

The third advantage is that certain information can be generated automatically after the coverscreen wizard is completed. This can explain why a respondent became ineligible for this wave. This automated information can help survey

agencies to analyze the states of specific respondents in the sample. Since it was necessary to use data collected in previous waves, the coverscreen wizard was only available for respondents who did not object to using previously collected data in the SHARELIFE interview. In case a respondent objected, the SHARELIFE SMS client application started the "old" Blaise coverscreen.

Synchronization

In order to synchronize data between the SMS Client application, the SD and CentERdata, the File Transfer Protocol (FTP) was used. FTP is a protocol that can be used to send files from a FTP-client application to a FTP-server application on a different server. The Internet provides the connection between the two components.

Both the SD and the SMS Client application have a built-in FTP-client. The client in the SMS Client was used for the synchronization between the SMS Client and the SD. The FTP-client in the SD was used for the synchronization between the SD and the CentERdata FTP-server. To set up the complete SHARELIFE software with automatic FTP-synchronization enabled, a FTP server had to be installed on the agency's server. An overview of the synchronization is presented in Figure 3.4.

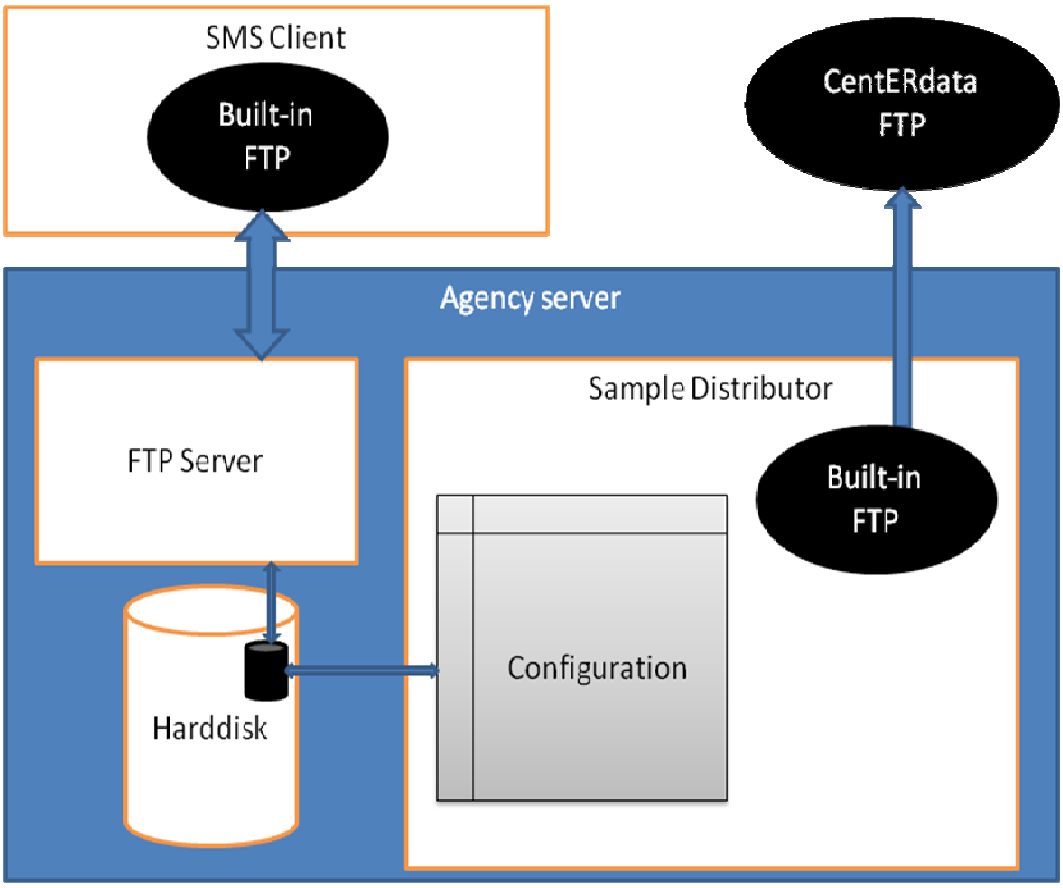

Figure 3.4: System overview for automatic FTP-synchronization

To carry out the actual synchronization, files were sent between the different FTP-clients and servers. There are two types of files: transaction files and CentERdata export files. Transaction files contain interview data, log files, and sample data of the households. These were used for the communication between the SD and the SMS Client. The SD is only able to *read* sample data from these transaction files, but can forward the log files and interview data to CentERdata. For this purpose the CentERdata-export file type was used. This file contains all interview and log data of the collected transactions plus a copy of all the data stored inside the SD (except for identifying information like the names and addresses of respondents). CentERdata used these files to create interview data files, which can be downloaded by the country teams to see the results of the interviews and to analyze the collected data.

3.3 Security

It is important to take security measures when working with personal data as in the SHARELIFE project. CentERdata created a protocol to minimize the risk of data abuse. Before and during the data collection phase, four actors were involved: Mannheim Research Institute for the Economics of Aging (MEA, Mannheim, Germany), CentERdata, the survey agencies, and the interviewers (in all participating countries). In some countries members of the country team actively participated in the data preparation phase. For simplicity's sake, these persons are considered part of the agency.

MEA provided the input from previous waves for the longitudinal households – the so-called preload database (see also Chapter 5) – which was necessary for use in the coverscreen wizard. CentERdata added names to the preload databases before the data were loaded into the SD. The following steps were taken, starting from the creation of the preload databases to the final processing of the collected data.

1. CentERdata received the processed data for the individuals in the SHARE study from MEA (preload data, collected in earlier waves).
2. CentERdata built country-specific SHARE SDs containing the preload data for each country. These country-specific SDs were made available for download from a password-protected website.
3. The different agencies downloaded the SD and installed it on a local machine/server. The security settings at this point were agency specific.
4. After its installation the address information was imported into the SD by each agency itself. Address information always stayed at the agencies; CentERdata and MEA did not have access to it. The imported address information was stored in a password-protected database and could be viewed by the agency's administrator. He/She could only log in to the application with an individual specific login code.
5. The agencies distributed the data from the households to different laptops. To initialize a laptop, a laptop-specific initialization (INI) file was created on the SD. This INI file only contained an ID to set up communications between the SD and the SMS Client (laptop). After the INI file had been

processed on the SMS Client it was automatically removed from the laptop.

6. The communication between the SD and the SMS Client was based on transaction files. These files could contain personal data. For security reasons, these files were encrypted using symmetric encryption, requiring a password as key (MD5 and DES). The transport of these files could be automated using an FTP-server at the SD side of the communication. The SMS Client had a built-in FTP-client to send the files to an FTP-server.
7. All personal information at the SMS Client side was stored in a password-protected database as well. Blaise files (containing the interview data) were stored on the laptop, and could only be read by Blaise itself.
8. The transaction files contained the contact database and Blaise files. These files were only available in an encrypted state at the SD side (using the MD5 and DES encryption methods).
9. Periodically the agency would export the collected data from the SD to CentERdata. This communication also used the encrypted (MD5 and DES) transaction mechanism. The data (except the Blaise files) were stripped of personal data before being sent to the CentERdata server. Only the encrypted Blaise files still contained personal data (names, gender, and year of birth).
10. CentERdata removed the personal data from the Blaise files as soon as they arrived at the server. This was done before their export to SPSS for processing (merging of databases, creating dummy variables, etc.). These data were only stored on an internal CentERdata server.

After the fieldwork was completed, the final data processing was performed by CentERdata. Processed data were sent to MEA for cleaning and preparation for scientific use. Users can download and use the data after signing a confidentiality statement in which the researcher agrees to the conditions for using the data (see http://www.share-project.org). After the signed statement has been received, a personal login code to access the data is provided. The public data contain scrambled identification (ID) numbers and do not contain any names of the individuals or households. CentERdata is the only actor who has access to the key to scramble the ID numbers.

3.4 Concluding remarks

Since the start of the SHARE project it has been a challenge to develop the survey instruments for the use by the agencies in the participating countries. The first survey instruments were developed in wave 1. Wave 2 could benefit from all lessons learned in the first wave, but an additional complexity was added due to the longitudinal dimension. . This required the programming of preload information collected in wave 1. Matching the correct individuals sometimes turned out to be a tough exercise. In SHARELIFE the setup of the survey instruments was such that after every action performed by the interviewer, a copy of the household state was made. The interviewer in the field, the agency, and CentERdata could revert to a previous state if a mistake was made. This

mechanism resulted in a very flexible system, but it also came at some cost. The files to be transferred could become large, resulting in rather slow data transfers in some countries. For future waves we need to find an optimal balance between flexibility and system load. The project remains an ongoing and interesting challenge.

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4 Fieldwork Monitoring in SHARELIFE

Barbara Schaan

4.1 Introduction

SHARELIFE is designed to be a genuine cross-national survey. One important task in order to ensure high data quality and cross-national comparability is monitoring the fieldwork as close as possible. Keeping track of the fieldwork in a timely manner helps minimizing the occurrence of errors such as nonsampling errors and errors due to attrition.

In order to standardize the monitoring efforts, a unique fieldwork monitoring tool, the sample management system (or short: SMS), was developed by MEA and CentERdata with support by the Survey Research Center (SRC) at the University of Michigan in Ann Arbor (see also Chapter 3). The SMS was not only used by each of the 14 professional survey agencies, which carried out SHARE in the participating countries. The SMS was also used by central project coordination at MEA in order to monitor the fieldwork progress in all countries.

4.2 Survey Agencies

Thirteen European countries participated in SHARELIFE. In each country, a professional survey agency carried out the fieldwork for SHARELIFE. Belgium was the only country with two survey agencies working on SHARELIFE: one agency was responsible for the French-speaking part of Belgium, the other agency for the Flemish-speaking part. Most of the survey agencies conduct the SHARE survey since the very first wave in 2004. This continuity is one pillar of the success of SHARE since survey agencies and interviewers become more familiar with the protocols of SHARE over time. Furthermore, being contacted by the same interviewer each wave increases the willingness of respondents to participate and therefore lowers the attrition rates (see, for example, Lepkowski and Couper, 2002). Only in two countries, namely Switzerland (in wave 2 in 2006) and Austria (in wave 3 in 2008) new survey agencies joined the SHARE family. For the complete list of survey agencies participating in SHARELIFE, see Table 4.1.

4.3 The fieldwork period

The main fieldwork period of SHARELIFE lasted about twelve months, from October 2008 until September 2009. Whereas the largest part of the fieldwork was done before summer 2009, the fieldwork was prolonged in most countries into early autumn in order to work on difficult cases, such as people living in old-age institutions, people who moved house, and to identify proxy respondents in order to conduct end-of-life interviews.

Table 4.1: Survey Agencies in SHARELIFE

Country	Survey Agency
Austria	IFES
Belgium (French-speaking part)	PSBH
Belgium (Flemish-speaking part)	Research Centre for Longitudinal and Life Course Studies (CELLO) - Antwerp University
Switzerland	LINK Institut für Markt- und Sozialforschung
Czech Republic	SC&C s.r.o.
Germany	infas GmbH
Denmark	SFI-SURVEY
Spain	TNS Demoscopia
France	INSEE
Greece	Kapa Research
Italy	DOXA S.p.A.
The Netherlands	TNS NIPO
Poland	TNS OBOP
Sweden	Intervjubolaget IMRI AB

Almost all countries started their fieldwork before the end of 2008. The only exception was France which started the fieldwork in May 2009 and conducted the whole fieldwork within 3 months. Of all cases that were finally interviewed, only about one percent has been interviewed after the deadline of June 30th, 2009 (see Table 4.3). Of these remaining cases, 53 percent were in France, where all of them were interviewed in July.

At the start of the fieldwork SHARE mailed an *advance letter* to each household in the gross sample before any other contact attempt was made. The main purpose of this advance letter was to inform respondents about upcoming calls or visits by interviewers and explaining the importance of participating in SHARELIFE. In some cases the advance letter also helped identifying respondents who moved prior to the start of the fieldwork. Respondents who showed a general reluctance after receiving the advance letter where sent a follow-up letter. Since in most cases the reason for reluctance was the question why to participate again after having participated in one or two waves prior to SHARELIFE, the follow-up letter was designed to reiterate the importance of cooperating in a panel survey.

Table 4.2: SHARELIFE fieldwork periods

Country	Fieldwork duration
Austria	January 2009 – May 2009
Belgium (French-speaking part)	October 2008 – September 2009
Belgium (Flemish-speaking part)	October 2008 – September 2009
Switzerland	November 2008 – May 2009
Czech Republic	November 2008 – August 2009
Germany	November 2008 – September 2009
Denmark	October 2008 – September 2009
Spain	October 2008 – July 2009
France	May 2009 – July 2009
Greece	December 2008 – September 2009
Italy	October 2008 – June 2009
The Netherlands	December 2008 – August 2009
Poland	November 2008 – August 2009
Sweden	December 2008 – August 2009

Shortly after the interview, the respondents received a thank-you letter from the survey agency. This thank-you letter was designed to increase the propensity to participate in future waves of SHARE. Some countries additionally sent season greetings cards to the respondents. In cases where the death of a respondent from previous waves was detected, the survey agencies also mailed a condolence letter to the family of the late respondent.

For respondents who moved into old-age institutions a special advance letter was designed. Interviewing respondents living in such institutions is often very difficult as not only the respondent, but also in most cases the respondent's family and staff of the old-age institution need to be informed about the study. Thus, this special advance letter contained not only information about SHARELIFE but also on the respondent's participation in previous waves of SHARE.

For respondents, who participated in previous waves of SHARE but who deceased in the meanwhile, SHARE has designed an end-of-life interview, which covers health, social and economic well-being in the last year of life. This end-of-life interview is answered by a proxy respondent, mainly someone next of kin to the late respondent. Only in cases where the respondent died very recently, interviewers were instructed to postpone the end-of-life interview until at least three months after the initial respondent's death.

Table 4.3: Distribution of Delayed Deliveries of Survey Data

Country	Percentage of data delivered on time (June 2009)	Percentage of data delivered after deadline
Austria	100.00	0.00
Belgium	99.48	0.52
Czech Republic	98.60	1.40
Switzerland	100.00	0.00
Germany	97.99	2.01
Denmark	99.95	0.05
Spain	100.00	0.00
France	92.87	7.13
Greece	100.00	0.00
Italy	99.92	0.08
Netherlands	99.43	0.57
Poland	97.79	2.21
Sweden	98.88	1.12
Total	98.76	1.24

Identifying a knowledgeable person who could provide information on the deceased respondent was a difficult task in those cases where the deceased respondent was living alone. In cases where this knowledgeable person was living far away from the late respondent's home, end-of-life interviews could also be conducted via telephone.

In some cases an end-of-life interview could not be conducted since no person next-of-kin could be identified. Especially for those cases the survey agencies were required to ascertain the death of a person from official sources (e.g. death registers) if possible.

4.4 Fieldwork Monitoring using the Sample Management System (SMS)

Monitoring the fieldwork in a timely manner is very important for the success of a survey. Problems can be identified very early, which gives the possibility to interfere and go against sources of errors. In order to facilitate the management and the coordination of the fieldwork, survey agencies were required to use an electronic sample management system (SMS). MEA and CentERdata designed this SMS with the support by the Survey Research Center (SRC) at the University

of Michigan in Ann Arbor (see also Chapter 3). Unlike in previous waves, where some of the agencies used their own sample management systems, all fourteen survey agencies applied the SHARELIFE SMS in the field. The SHARELIFE SMS contains all households to be approached by interviewers, together with the sampling frame information that is used to locate each household (e.g. address, telephone number). The interviewers were trained to record all contacts and contact attempts with the households into the SMS, such as the result of the contact attempt as well as date and time the contact attempt took place. Additionally interviewers could add information in case the contact was done with a proxy. A special remarks field enabled them to write down anything else which they thought could be helpful for further contact attempts. The collection of this data helped interviewers to tailor contact strategies for household that were difficult to contact which in turns helped to minimize the non-contact rates in SHARELIFE. Call record data were also used to manage refusal conversion strategies, especially when addresses were transferred from one interviewer to another. The SHARELIFE SMS also contains an agenda function, which offers the possibility to enter appointments for interviews. The CAPI interview can only be started from within the SHARELIFE SMS. Thus, the exact date and time of the interviews are automatically stored in the SMS. The SMS also contains the information whether an interview has been completed or interrupted.

Interviewers were supposed to submit the data collected in the SMS back to their survey agency at least once every two weeks. Survey agencies in turn submitted the collected data to CentERdata every two weeks at pre-defined dates. CentERdata then made the data available for analysis for the coordination team at MEA.

Since the data has been submitted on a biweekly basis, the fieldwork monitoring did not only focus on the fieldwork development so far but especially on the progress made within the last monitoring period (which is within the last two weeks). The central coordination team at MEA produced short reports which where sent to the country team leaders for discussion with their survey agencies. Such reports usually included information on:

a) the number of households contacted so far and within the last monitoring period
b) the number of completed interviews so far and within the last monitoring period
c) the number of interviewers actively working on SHARELIFE within the last monitoring period
d) current progress and retention rates
e) refusal rates

Figure 4.1 gives an example of one of the items presented in the biweekly reports. The figure shows the fraction of households which have already been contacted. It becomes apparent, that countries applied very different contact strategies. While some countries contact as many households as possible within the first part of the fieldwork phase, others contact households in tranches steadily throughout the fieldwork phase.

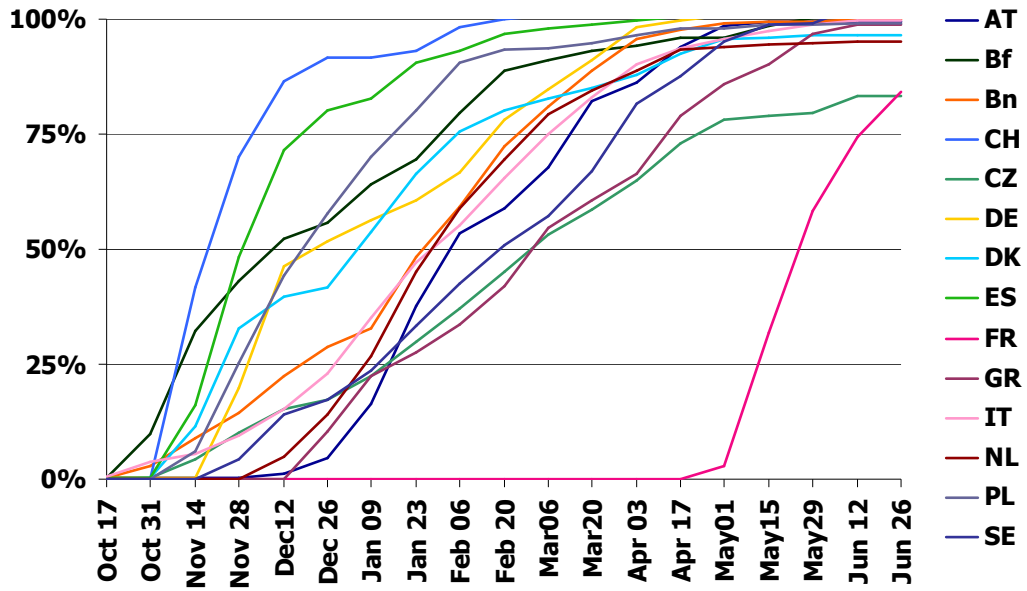

Figure 4.1: Percentages of households already contacted

In the beginning of the fieldwork the SMS also enabled the coordination team to control how long it took until all trained interviewers actually became active. Figure 4.2 shows that in most countries it only took a few days or weeks until all trained interviewers had started to work on SHARELIFE. (Given the late fieldwork start, this also holds for France.) Only a few countries showed a slow but steady increase in the first third of the fieldwork phase. Figure 4.3 displays the number of interviewers which actively worked on SHARELIFE within each monitoring period. There was a steady fluctuation. Towards the end of the fieldwork period there is a natural decline in the number of active interviewers, since more and more interviewers finished their sample points and stopped working.

Towards the end of the fieldwork period the focus was on eligible households where no interview had been conducted so far. The SMS helped to identify those households with only one or two contact attempts. Since the minimum requirement of SHARELIFE was to have at least eight face-to-face contact attempts before a household could be classified as not reachable, this helped focussing attention of interviewers on those households.

The fieldwork monitoring report also kept track on the number of completed interviews per interviewer within a monitoring period. In cases where interviewers did many interviews within a very short period of time compared to other interviewers the coordination team checked the interview length and quality of those interviews. This provides the opportunity to replace interviewers or re-train them in case odd results are found.

An electronic sample management tool with so many features capable of dealing with several tens of thousands of cases does not come without a price. CentERdata and MEA invested a great amount of time into the design and

implementation of the SMS. It was not easy to come up with a sample management system that accounted for the needs and specifications of fourteen different survey agencies. Additionally, many hours of training are necessary to make the interviewers comfortable with the SMS. All in all, setting up the SHARELIFE SMS was a time consuming task *prior* to the fieldwork phase.

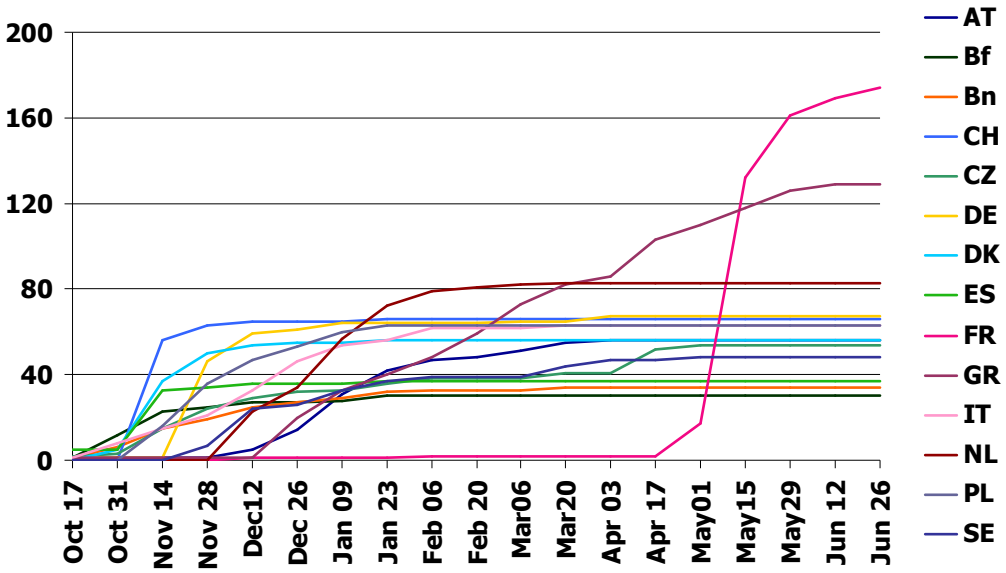

Figure 4.2: Number of interviewers in the field (total)

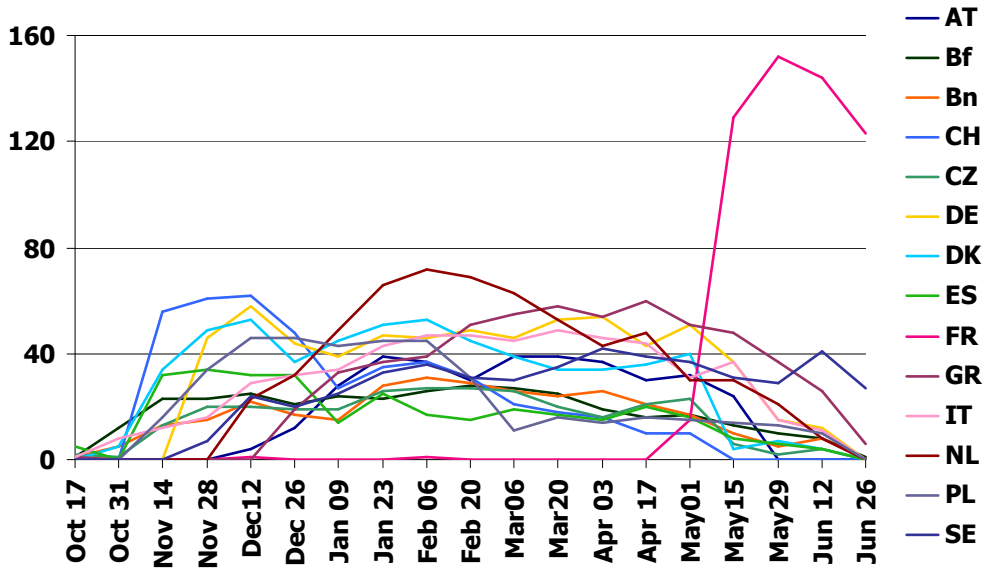

Figure 4.3: Number of active interviewers during each monitoring period

But all those efforts pay off. The great advantage of an electronic sample management system is that it enables real-time monitoring. A huge variety of paradata is collected and available for analyses without delay and without huge additional effort *during* the fieldwork phase. Identifying possible problems in the field and their possible reasons early in the process was the main purpose of collecting this paradata. The coordination team and the country team leaders discussed strategies to cope with these problems, with the country teams then contacting the survey agencies. Remedies to these problems could be implemented without unnecessary delay.

4.5 Conclusions

The third wave of SHARE provided again new challenges to the fieldwork process, while old issues have been overcome. It was very useful to have all countries using the same Sample Management System, as this provided the coordinating team at MEA in Mannheim a constant *comparable* flow of information from the field, which could be used to jump in whenever necessary to improve matters directly in the field. On the other hand, the common system forced agencies to use the SMS provided, which meant additional learning time and costs on their side. However, as the scheme of "one SMS for all" will be continued in the future, the long-term benefits will clearly outweigh the short-term costs experienced in SHARELIFE.

References

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5 Pilot Testing the SHARE Quality Profile

Kirsten Alcser, Grant Benson, and Heidi Guyer

5.1 Background

Quality profiles are gaining increased prominence in survey research. Generally, quality profiles provide a summary of what is known regarding the quality of a survey. They consist of objective assessments of all potential sources for error, including the magnitude of each source. In principle, these data have utility for users of the data and also inform design decisions for subsequent survey implementation, with the acknowledgement that not only is there often a trade-off between cost and quality, but there may also be a trade-off between different error sources.

While there is no commonly accepted standard for what should be included in a quality profile, there is general consensus of key areas among the published reports:

- Statement of core research purposes
- Sample design
- Coverage and sampling error
- Data collection procedures
- Non-response error
- Statistical adjustment procedures
- External comparison
- Documentation and data accessibility

By documenting processes and procedures at each stage of the survey life cycle, potential error is accounted for, starting with sampling and questionnaire design, through data collection, and ending with statistical adjustment procedures and documentation.

Traditionally, quality profiles focus on 'fitness for use' by providing parameters for data generalizability as well as highlighting any potential data pitfalls. As such, the emphasis tends to be on pre-production activities such as sampling and questionnaire design, as well as post-production activities including data cleaning and assigning of sample weights. Much less attention is usually paid to the data collection (i.e. production) process. Thus, it has been virtually impossible for research analysts to assess whether divergence in data collection process and procedure, either across time or data collection agencies, might be at least partially responsible for observed variance in the data.

This chapter reports on the efforts of establishing a production quality profile for SHARE, the Survey of Health, Ageing and Retirement in Europe, which aims at installing this feature as one quality element in the survey. We focus here on the process of setting up the necessary quality monitoring infrastructure, while results from the quality profile will be presented elsewhere.

5.2 The SHARELIFE production quality profile

Starting with the 2008-2009 data collection, SHARE sought to document performance outcome measures collected prior to the post production phases. Collecting and documenting results of quality assessment performance outcomes during preproduction and production, as well as at the end of production, would contribute important contextual information for the benefit of future analysis of the SHARE data as well as serve as an opportunity for survey agencies to make improvements on current and future waves of data collection. This was to be accomplished by providing an on-going feedback and reinforcement mechanism between the coordinating centre (MEA) and the survey data collection agencies. At the conclusion of the pre-test and the main study pre-production phases, survey agencies were provided feedback on adherence to project goals. During data collection, survey agencies were not only provided on-going reports on overall data collection issues, but were also required to submit biweekly status reports on key process indices as a reminder and reinforcement mechanism (see also Chapter 4).

Thus, the first SHARE production quality profile deliberately focused on the assessment and improvement of those aspects of the project that would, in fact, promote *ex-ante* harmonization of the survey process. The critical aspects for the production quality profile were considered to be interviewer recruitment and training, pre-test and main data collection.

The quality profile was first implemented for the SHARELIFE data collection as part of a pilot effort with the University of Michigan Survey Research Center (SRC) consultant team. This was considered a pilot quality profile for several reasons. Significantly, it was unclear at the outset whether the contractual process requirements would have similar effects on data quality for all the countries. Moreover, given that the quality profile data collection instruments were administered in English only to survey agencies with a broad range of experience levels and national traditions, it was uncertain whether technical terms would be interpreted similarly across survey agencies. Thus, the pilot production quality profile data collection was initiated with the expectation that (1) improvements in data collection would be accomplished based on lessons learned in the pilot production quality profile, and (2) a careful review would be undertaken of the quality profile objectives to further establish a common understanding of measurements before formalizing this quality monitoring and documentation tool for future waves of SHARE.

5.3 Implementing the SHARE production quality profile

The SHARE production quality profile was based on the accumulation of production-related measures obtained from and by participating SHARE survey agencies starting with the pretest and ending with main study data collection.

The purpose of the pilot production quality profile was primarily to track survey agency adherence to contractual and quality standards, and to propose data

collection process improvements. In order to accomplish these objectives, information was collected and analyzed from multiple sources, including:

- Agency self-reports
- In-person observations
- Sample management data.

Six primary contractual requirements pertaining to production/data collection were evaluated, which we list in the following. Quotations are taken from the survey agency contracts.

Interviewer Recruitment
The SHARELIFE contract did not provide specific guidelines for interviewer recruitment, but stipulates that each survey agency "shall make sure that as many interviewers as possible who already participated in the SHARE 2004 or 2006 study will also participate in the 2008 SHARE survey." In addition, the contract stated that "All interviewers shall have extensive general face-to-face interview experience. All interviewers personally receive general interview training from [the national] survey agency prior to attending study-specific training. This includes techniques for approaching a household, addressing respondent concerns, probing, recording responses, etc."

Interviewer Training
"Conduct study-specific in-person training sessions of interviewers in local language, each considering the schedule of the "train-the-trainer" programme using materials provided by SHARE" for each stage of the survey process. Additionally, the survey agencies were "responsible for translating interviewer-training materials into local language. Only materials approved by SHARE will be used in the interviewer training sessions." Local training was required to adhere to the content and time specified in the TTT model training agenda. For this wave of data collection, the TTT model agenda devoted approximately 15.5 hours to cover the minimum SHARE-specific General Interviewing Techniques and the SHARE study-specific training.

Interviewers and Number of Interviews per Interviewer
"A minimum of 50 interviewers [are required to] work on the longitudinal main survey. In the main survey, the number of interviews per interviewer must not exceed 50." The primary purpose of these requirements was to limit the effect that interviewers exert on the variance of sample estimates.

Interviewer Effort
This requirement referred specifically to the number of contact attempts: "[A] minimum of eight contact attempts at various days of the week and times of a day is required before a household can be considered as unreachable." Previous SHARE data demonstrate the impact of number of attempts on differential participation rates by demographic characteristics. In order to increase data

consistency between and within survey agencies, the minimum threshold of eight attempts was required prior to coding out a case as a final non-interview.

Retention Rate
While the SHARE contract did not mandate a specific retention rate, it did estimate "fieldwork costs … to achieve a retention rate among subsamples A and B", where subsamples A and B were defined by respondents who participated in wave 2 of data collection (subsample A) or who participated in wave 1 only, but lived in a household where another respondent participated in wave 2 (subsample B). High retention rates were considered critical to the long-term viability of the panel.

Quality Assurance
The SHARE contract required of survey agencies that they "certify that a minimum of 20 percent of each interviewer's completed interviews are verified by supervisory personnel. […] Verification involves calling the respondent by telephone and re-asking factual questions from various parts of the interview. Written records of the verification process must be maintained by <survey agency>." Verification calling is primarily a tool for assuring that interviews were conducted with selected respondents, although such calls may also be used to assess non-response error or data entry error.

5.4 Some first results

Based on these contractual requirements, several on-line surveys were designed to be answered by the agencies before, during and after the fieldwork. Survey agencies completed the survey, capturing, among other things, key outcomes pertaining to specific requirements outlined in the SHARE contract.

- Interviewer training – fulfilment of hours and content covered, as proscribed in the model training agenda. Six survey agencies completely satisfied the requirement across both General Interviewing Techniques (GIT) training requirements and study-specific training requirements, two survey agencies came close, and 3 survey agencies did not meet this requirement.
- Number of interviewers – must recruit minimally 50 interviewers to work on this wave of data collection. Eleven survey agencies met this requirement, while three did not.
- Number of interviews completed by an interviewer – not to exceed a total of 50 interviews. While only two survey agencies met this requirement, overall only a few of the more than 1,000 interviewers did more than 50 interviews.
- Average attempts before coding out as final no contact – a minimum of eight (household) attempts. Only two survey agencies met this requirement.
- Retention rate – a target retention rate of 80 percent for subsamples A and B. Five agencies met the goal, while nine agencies did not.
- Verification call-back – a minimum of 20 percent of all interviews had to be selected for verification. Ten agencies met the verification requirement.

The last results must be seen in the context of the governance of survey work in most European countries: interviewers are usually self-employed with a high degree of independence working for several survey agencies at the same time, diluting the control which SHARE can exert on interviewer work.

In addition to collecting information via the on-line surveys, observations of local trainings took place between the train-the-trainer (TTT) sessions and the start of the fieldwork in the member countries. A total of nine local training sessions were observed between October 19 and October 31, 2008. The consultants from the University of Michigan Survey Research Center observed these local training sessions. Each observation lasted 6-8 hours. Additionally, the SRC observers reviewed the training agenda with the survey agency trainers and the Country Team Leaders (CTLs) to determine whether the content satisfied the SHARELIFE training requirements. Information was collected in a standardized fashion, using a training observation form. This form was divided into three sections: Content review, logistics, and materials.

Interviews were conducted by telephone with selected staff at survey agencies where it was not feasible to conduct observations due to training schedule conflicts (e.g., countries conducting training on the same days). The telephone training debriefing made use of the same training observation assessment form. However, the observations based on telephone interviews were not formally scored and are not included in results reported below.

Training Content & Length of Training

Measurement areas included length of training and content, incorporating a full mock interview (i.e. group practice of the questionnaire administration) and reinforcement of GIT. Six agencies met all training requirements, one agency came close, and two agencies did not meet the requirements for training content.

Logistics

Measurement areas included location, conference setup (e.g. seating arrangements, breakout space as needed); the handling of questions; trainers; presence and participation by the Country Team Leader or Country Team Operator (CTO). All agencies met the requirements, providing an adequate to very good setting for the SHARELIFE training. Also, the request by SHARELIFE for the CTL and/or the CTO to be present and participate in the training as appropriate was met for all but one observed training session.

Training Materials

Measurement areas included training agenda, Interviewer Project Manual, and all other training materials specified in the SHARELIFE TTT programme. Seven agencies met all of these requirements, and two agencies did not meet these requirements. Thus, most survey agencies translated materials provided by the SHARELIFE TTT programme and used these materials to conduct training: PowerPoint slides, SHARELIFE manuals, Sample Management System (SMS) exercises, Grip Strength card, Blaise key card and probe card, etc. However, it was observed that laptops were not available for all interviewers at all trainings.

Most (6 of 9) survey agencies observed by the consultants/trainers met SHARELIFE requirements on all dimensions. Two organizations did not meet the requirements, and one only marginally met requirements.

5.5 Concluding remarks

This was the first step by SHARE to improve the transparency of its complex multi-national fieldwork process. The quality profile project in SHARE collected information about the data collection process and outcomes, producing a production quality profile at the survey agency level as well as for the project overall. Attempts were made to collect information on performance measures based on fulfilment of contractual stipulations, as well as on indicators of quality assurance during the survey process. The emphasis on the outcome of the quality profile documentation for this wave of data collection was to assess agency adherence to contractual requirements, but with a focus on suggested improvements for future data collection efforts.

Because SHARE emphasizes the importance of a standardized training approach for *ex-ante* harmonization of cross-national data collection, it incorporated the direct observation of local training as a component of its evaluation of local training. Consultants observed training in nine of the SHARELIFE survey agencies and conducted telephone interviews with the remaining agencies. The in-person observations proved an invaluable tool in determining root causes for potential deviation from specified project objectives. As outsiders, the observers were able to provide a dispassionate assessment of adherence to project requirements. The goal for future SHARE training evaluation would be to attempt to observe training in all countries. This will require some measure of project level coordination of the schedule of local trainings, so as to avoid overlap of training dates, or an expansion of the consultant observer team to cover multiple local training observations at the same time.

Most agencies successfully recruited interviewers with previous SHARE experience. In fact, it was reported that these interviewers self-selected for work on this wave of data collection. It is highly probable that the proportion of SHARE experienced interviewers will increase with future repeated waves of data collection.

However, in some instances, survey agencies shortened the training because they felt that experienced interviewers already knew how to administer the SHARE instruments and protocols. Thus, it was felt that interviewers who had previous experience with SHARE data collection or who were experienced as a result of working on other survey studies required less training.

There is some concern about retention rate and sample maintenance across waves of data collection (see also Chapter 7). Retention rates of sample A (i.e. respondents who participated in wave II of data collection) were below the required rate of 80 percent for approximately half of the data collection efforts. Lower rates predict a serious decline in the panel sample base moving forward, which is an obvious concern for the project.

For future SHARE Quality Profiles, there are some recommendations regarding the process. First of all, terms used in the online quality profile surveys should be explained in greater detail. More discussion is necessary with members of the survey agencies who coordinate data collection so as to arrive at consensus about dimensions of quality to be measured and captured. Finally since the assessment of quality at the agency level is only as good as the quality of the data entered, survey agencies need to make sure that those knowledgeable of the process provide the information and that it be provided completely.

In conclusion, the main objective for the pilot production quality profile was to identify the types of data that could be collected across agencies to assess the quality of the data collection effort and to identify areas needing improvements. We believe that this has been accomplished.

6 Glimpsing into the Blackbox: Data Managing and Cleaning Processes

Christian Hunkler, Thorsten Kneip, Julie Korbmacher, Stephanie Stuck and Sabrina Zuber

6.1 Database management in SHARE – an overview

A data collection effort such as SHARELIFE entails a large amount of work which usually is neither noticed by the respondent nor by the researcher who finally uses the data. It involves several steps around what is called "cleaning" the data – a necessary process when over 1,000 interviewers produce about 28,000 interviews. This chapter is meant to give an overview of the tasks and thus provides some explanation of why such a long time passes from when the data are collected to when they are finally released. While this chapter is in the SHARELIFE methodology volume, it provides an overview of all SHARE database tasks and challenges alike.

As in all parts of SHARE, high standards are applied as well in the data base management concerning cross national comparability and harmonisation, which requires tremendous coordination and cooperation between the different actors involved. The central coordination unit of the SHARE data base management is located at the Mannheim Research Institute for the Economics of Ageing (MEA) in Mannheim, Germany, while the more technical part of data base management is done by CentERdata in Tilburg, the Netherlands. Among other things, CentERdata is responsible for the collection of all data from the survey agencies, provides the internal versions of the raw data and, once a data release has been finalized, distributes the public release data versions on the web site. The teams of researchers and operators in each country also play an important role in data base management: First, they are responsible for all issues that require knowledge of the national languages. Thus, country teams have to check all interviewer remarks and provide programmes to correct data accordingly (also see section 6.3). In addition, they write programmes to correct wrong IDs, erroneous household compositions or demographic information (see also section 6.2). Furthermore, they are involved in developing coding schemes and apply them to the open answers given in the field (also see section 6.4). The imputation group located in Padua and Salerno, Italy, is another important actor for the data base management. They provide multiple imputations of missing data based on a first cleaned version of the data, which already takes into account the corrections mentioned in the previous steps. Similarly, the group working on the survey weights – located in Rome, Italy – uses the first corrected data to compute different weights for all SHARE countries centrally.

To ensure common standards, coordination of the data base management tasks is essential, and thus the different actors meet on a regular basis. Usually these (half to one day) meetings take place together with regular SHARE meeting every three to six months. Here, MEA, CentERdata, the so called country team

operators, and sometimes members of the imputations team meet to discuss strategies, solve appearing problems and to agree on a work schedule. The central coordination team provides instructions and programme templates for the tasks locally processed. Country team operators then execute the instructions and write programmes for the respective country. MEA pools and runs all these programmes centrally to produce new versions of the data.

All data base management processes are basically aimed at generating two main products: the public release data and the so-called preload data for the next wave. While the "public release data" are those used by the scientific community to do research, "preload data" are data which come from a previous wave of data collection and are used in the interview of a new wave. Using preload data involves having all demographic information of a previous respondent loaded into the Sample Management System (see Chapter 3), such as information on gender, age, previous interview status, as well as details on household composition. With this information, the interviewer can check the details on the respondent before the interview. During the interview, just checking for changes is quicker, and the interviewer as well as the respondent may feel more comfortable when reiteration of known facts is not necessary.

The first steps of data cleaning are done for both purposes – public release and preload data – in common and then the procedures are split. The first adjustments are sometimes already necessary during the fieldwork on interviewer laptops directly, and are done by CentERdata. After fieldwork, the process of data cleaning starts with corrections according to interviewer remarks (see section 6.3). These are followed by corrections that come from checks of matching between modules within and across waves. The main focus here is on the identification of household members (via their ID numbers) and basic demographic characteristics (see section 6.2). The resulting corrected data base is used for the public release as well as for the basis of the preload data for the next wave. Only afterwards, preload information is combined with information from other sources, e.g. if survey agencies have knowledge on whether a respondent has deceased.

Public releases of SHARE data further require certain changes to the raw data to make the files user-friendly: Main issues are data formatting and the provision of generated variables (e.g. coding of education into ISCED categories). Furthermore, for data protection purposes open answer variables are not included as text, but in their direct form but in category coded form only (see 6.4 and 6.5).

As indicated in figure 6.1, which gives an overview on all data management tasks and the involved actors, database management – especially in a panel study – is not a one-way process, but rather a procedure that includes feedback loops. Some problems in the data can only be detected if new information is available, for example from feedback of interviewers or from new data of a next wave. User questions and hints from their side are also very useful to spot errors. Corrections based on such information are then included in the next version of the data base that is used again for the next release and the next preload data.

Last but not least, it is important to point out that data cleaning in SHARE is done very conservatively. The general philosophy is that respondents are experts of their own lives and that their answers need to be taken seriously and at face

value. Modifications of the original data are only made if it is certain that a specific value is wrong and if, beyond that, reliable information on the correct value is accessible (e.g. from an interviewer remark). Data are never changed based on mere plausibility assumptions. However, if implausible values occur, additional indicating variables might be added to the data. The user is free to decide how to handle ambiguous or contradicting information, but is always urged to be as careful as possible with assumptions and changes to the data.

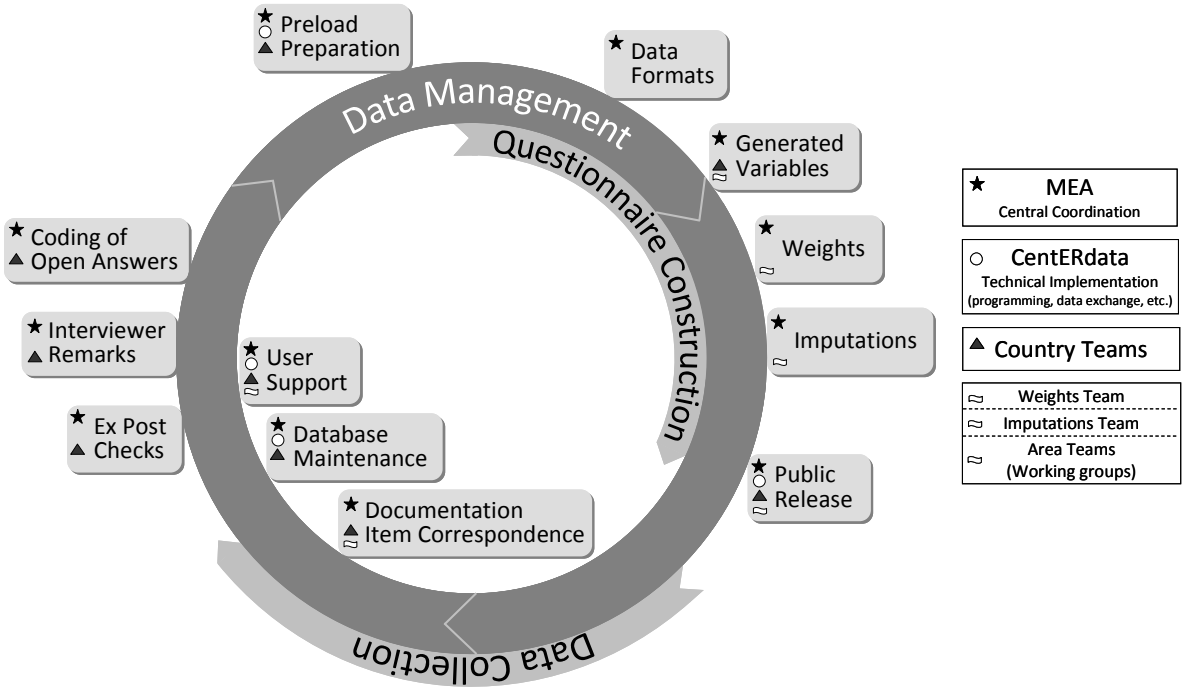

Figure 6.1: Database management tasks in SHARE and actors involved

6.2 Ex post checks

After the end of the fieldwork period the survey agencies from all participating countries send the CAPI data one final time to CentERdata who then upload these raw data to an internal server. One central task for the database management team at MEA, the country operators, and the survey agencies is to check and correct the delivered raw data and to prepare the data for the public release and for the preload of the upcoming wave. Thus, the central database management team has to run two parallel processes: first, producing a public release dataset for the current wave and second, generating a preload database for the next wave of data collection. For both processes it is essential to have the same basic checks and corrections on several variables, mainly on IDs, demographics, and household composition.

For a longitudinal study like SHARE, a correct matching of households and individuals across waves is essential: It is a precondition for analysing changes

across time as well as for preloading necessary information into the CAPI instruments of following waves. On the individual level it is compulsory that correct IDs, demographic variables, information about moves and deceases, panel status (i.e. whether to use the baseline or longitudinal questionnaire), and other preload measures are linked to the right respondent. On the households level correct IDs are important for the matching with the survey agency address files. This section focuses on the matching of households and individuals across waves. To give the reader a notion of magnitude of the challenge: only in about 5% of the cases problems exist with the demographic information – however, these 5% constitute 95% or more of the work associated with the data cleaning process.

In a first step the database management team at MEA corrects IDs mostly on the household level according to indications by the survey agencies. Those get information about potential household mix-ups directly from their interviewers. Sometimes interviewers conduct an interview using a wrong household ID. This is either due to technical problems or interviewers simply click on the wrong line in the Sample Management System (SMS) when starting the interview. Survey agencies also have information about moves and deceases from their panel care activities which is used to correct the household composition for the next wave.

Secondly, MEA does systematic checks to identify mix-ups within households. These are detectable by merging the information gathered in the different modules of the CAPI-data of SHARELIFE (in the first two waves of SHARE also drop-off and vignettes questionnaires were used). The most frequent problem within a household is that partners are mixed up. This means that interviewers by mistake questioned household member A on household member B's ID and vice versa. Those mixed up partners can be corrected using a Stata procedure that compares gender, year of birth, marital status and other relevant information. Another "within household problem" which arises sometimes is that respondents get a new ID because interviewers did not realise that the respondent already lived in this household in the previous wave. By checking the household composition across waves the same persons interviewed with different IDs can be detected. Further on, the data cleaning team uses information from the remarks, which comes directly from the interviewers. Some corrections in IDs and demographics is based on this information.

With SHARELIFE a more elaborated SMS was introduced, that already records changes in the household composition and basic demographics of household members in the first part of the interview, the "coverscreen wizard" (see also Chapter 3). The household composition and basic demographics are preloaded if the respondents agreed to this procedure. Interviewers then check with the household respondent if there are people missing, if a person actually never lived in the household, or if anyone has moved in between the waves. Interviewers can also correct year and month of birth, which helps to consolidate the household composition and the demographics. Introducing this comparison to the household composition of the last wave allows for easier linking across panel waves, such that these consolidated data are then the backbone for the public release and the preload data.

It should be mentioned that another source of information about non-matching respondents is to compare the data gathered in the CAPI interview with administrative data. For the German part of SHARELIFE, data was linked with administrative records of the German Pension Fund ("Deutsche Rentenversicherung", SHARE-RV). For the cases successfully linked demographic information according to this very reliable administrative database can be corrected. This is planned in other countries as well for future waves.

6.3 Dealing with remarks

During the interview, interviewers have the possibility to enter a remark. These remarks are associated with the question the respondent is answering at that point in time – even though the remark may not have to do anything with that question. As interviewer remarks prove to be an important source for data cleaning, interviewers were instructed to record additional information which could be useful to understand respondents' answers. For every question interviewers could add a remark in the CAPI software by pressing a special shortcut. The remarks are recorded similar to the text of an open question and are of course in the language the interviewer uses.

There are multiple kinds of remarks, each having different implications for the subsequent data cleaning process:

1. Typographic errors: These are the most important remarks as they include information on the answer being wrong due to an interviewer mistake. In this case the recorded answer can easily be corrected.
2. Explanations of given answers: If the respondent was not sure whether he or she understood the question correctly.
3. Additional answer categories: Some remarks point to missing answer categories, e.g., if respondents feel that none of the provided answer options applies to their situation. These remarks are very helpful for the questionnaire design of following waves.
4. Problems during the interview: These remarks can help to give the survey agencies and the SHARE team feedback about potential sources of problems.
5. Other remarks

Potential of the remarks

One can distinguish two different potentials of the remarks, which tie back into the scheme of providing release and preload data: correction of erroneous actual data and improvements for the following waves. Data correction is mainly based on those remarks describing typographic errors. If the interviewer mistyped an answer and was not able to correct it during the interview, the data can be corrected ex post based on such a remark. Remarks explaining given answers could also be relevant for data cleaning. If a remark clearly indicates that a given answer is wrong and the right answer is also included, the remark serves as a source for data correction. However, the SHARE policy also employed in SHARELIFE concerning corrections based on interviewer remarks is very

conservative: data will be corrected only if one can be absolutely sure that the given answer is wrong and if the right answer can be inferred from the remarks.

Knowledge of the problems which arise during the interview is very important for improving instrument and interviewer training for the next wave. There may be several reasons for such problems: Many remarks for the same question in one country may hint to translation problems of this question. If the remarks arise in different countries they may indicate that the question is unclear in general. On the one hand, this information can be used to change some questions for the following waves. On the other hand, it highlights which aspects of the questionnaire are unclear for respondents and interviewers and should be included in the interviewer training for the next wave.

Remarks in SHARELIFE as an international survey

The total number of remarks differs from country to country. They range from less than 300 (Austria) to more than 4.000 in Sweden. But the countries also differ in the number of realized interviews. Figure 6.2 shows the average number of remarks per interview per country in SHARELIFE.

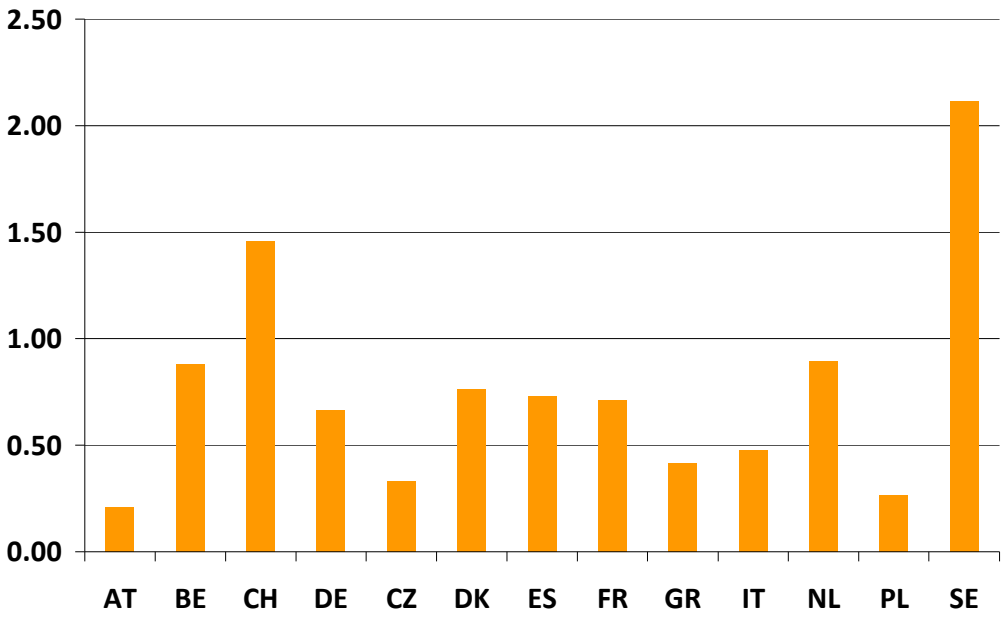

Figure 6.2: Remarks per interview across SHARELIFE countries

Except for Sweden and Switzerland, all countries have on average less than one remark per interview. The reasons for the country differences in the total number of remarks are unknown yet, but might point to more problems during the interview in some countries (e.g. due to translation issues) or to differences in interviewer training across countries (see also Chapter 5).

Due to the fact that SHARE is an international survey, the handling of remarks cannot be accomplished centrally for all countries as the remarks are in the respondents' respective national language. However, it is very important to

harmonize the handling of remarks across all countries, because dealing differently with remarks may lead to unwanted variation in the data across countries. Therefore, the process requires cooperation between the central coordination and each country team. In order to achieve a standardized procedure the data cleaning team in Mannheim has created a programme to handle the interviewer remarks for all countries.

Country teams receive MS Excel files with all their country's remarks which include a "*Stata do-file generator*". (Most country teams and the central data cleaning team in Mannheim use the statistical software package Stata™ for data management and cleaning. The MS Excel sheet is designed to produce standardized Stata code lines.) The main work is to decide, module by module, which remarks are relevant for the central data cleaning team, the country teams, or the survey agencies. If remarks allow for direct correction of the data, country team operators fill in the different columns in the file and the corresponding Stata command is automatically generated. In most of the cases, the remarks are useful to identify problematic questions, but the data cannot be corrected. For example, remarks often include explanations why none of the possible answer categories fit with the answer the respondent wanted to give. In this case the correct answer is available but one cannot correct the data because the needed answer category is not included. Here, the country teams add a "flag variable" with the (translated) respondent's answer, which is then collected and compared over all countries by the central data cleaning team in Mannheim.

6.4 Coding open answers

SHARELIFE data, as well as the previous SHARE waves, include a number of variables storing text information (string variables). Most often these variables contain respondents' open answers to follow-up questions. For example, questions with categorical answer options often include a category "other" that allows for specification. Another frequent type of question resulting in text information in SHARELIFE is the currency corresponding to an amount of money stated in a previous question. Variables of this kind have to be processed before they can be included in a public release. The raw data may contain sensitive information that allows for inferences on the persons interviewed. Thus, variables containing open answers have at least to be screened and cleaned in this respect. Moreover, such variables are not very user friendly, especially as the text information is stored in the many different languages used for the interviews in the participating countries. For this reason, one would like to code open answers into existing or new categories, which are in some cases used in a following wave as a regular answer category.

The most extensive coding in SHARELIFE was done for the currency information. Here, the problem is even more severe, because the raw currency strings are difficult to use right away. SHARELIFE allowed respondents to report financial amounts in the currency in which they can give the most accurate account. Interviewers then simply typed in the respective currency as a string. There are three reasons why the editing of these strings must be performed very

accurately: First, the life-spans of SHARELIFE respondents in most countries cover various currencies, e.g. due to currency reforms or migration. It can, however, not be assumed that respondents report amounts in the currency of the respective time and country: they might also convert an amount corresponding to a pre-Euro time into Euros or vice versa. Second, respondents often supplied non-standard local currency names or abbreviations or they did not specify the country (e.g. "francs" may refer to France, Switzerland or Belgium). Third, currency abbreviations are often short (3 or less letters) which makes identifying typographic errors difficult.

For these reasons a routine was developed to code the raw currency information into a numeric variable using a code scheme of the most common current and former currency notations. The applied procedure started with creating country specific lists with unique strings extracted from *all* variables containing currency information. These lists were distributed to the country teams together with a code scheme of the most common current and former currency notations. Country teams then coded the strings into numeric variables as conservatively as possible using the supplied code scheme (i.e., no assumptions, not the "likeliest" currency). Only unambiguous answers were coded into the currency code scheme, additional codes were used for ambiguous strings.

A similar procedure was applied to the coding of open answer information as it appears in "other – specify" variables (e.g. question AC010, *other private residence*, or question AC012, *other non-private residence*). Again, lists with unique string information were produced and distributed to the country teams who assigned codes according to a provided coding scheme. These schemes contained the generic categories of the preceding question as well as additional categories that emerged after a screening of the data. The process of recoding open answers is ongoing – while some of the variables have been coded and included in a public release, further coding operations will be designed in collaboration with the country teams and interested data users to allow for tailored and ready-to-use generated variables.

6.5 Getting the Data Released

Getting a ready-to-use dataset released is what all the work on SHARELIFE and every other SHARE wave eventually results in. However, it is not an end point of the data cleaning process but rather a successful completion of a stage. User feedback on potential problems in the data or on the linkage of respondents across waves, for example, may bring up issues that call for further editing and a re-release of the data. This is one reason why the whole data processing in SHARE – from raw data to public release – is organised as a sequence of procedures controlled by one single master programme. Specifically, the master programme is a *Stata do-file* that calls a series of other do-files which include the actual data editing routines and commands. This setup guarantees that replication is always possible – in the case that something changes in the input data or along the way, one can always track the changes through the array of programmes.

Besides issues of data quality a user-friendly data structure is also of importance for a publicly available data set. User-friendliness involves an additional editing of the cleaned raw data. Therefore, not only data cleaning programmes but also formatting routines are addressed by the master programme. These routines include

- the creation of sets of dummy variables to store answers where a respondent can choose more than one of several answers (e.g. question AC018, question CS007);
- the conversion of any specified amount to Euros (waves 1 & 2) using current conversion rates for non-Euro countries and fixed conversion rates for pre-Euro information in Euro countries;
- the editing of "unfolding bracket" variables (see *SHARE Release Guides* on the SHARE website) holding financial information: auxiliary variables are eliminated and a consistent naming and labelling structure is applied;
- the assignment of consistent missing values and non-response codes (-1/-2 for "don't know"/"refusal", -9999991/-9999992 in case of financial variables that might take negative values) as well as variable label information.

In addition to the edited data from the CAPI interview, SHARE release data is supplemented by modules including generated variables, such as the body mass index, depression scales (Euro-D), or ISCED codes, as well as sampling design weights, calibrated cross sectional weights and calibrated longitudinal weights. Furthermore, multiply imputed values are available for a set of demographic variables, individual and household level economic variables, as well as generated variables.

6.6 Documentation and user support

When the scientific use data are released, one of the most important parts is the documentation and user support. Due to its longitudinal, cross-national and multidisciplinary nature, right from the start SHARE was a very large and complex research database requiring extensive documentation and user support. The provision of supplementary modules – as weights, imputations, and several topic-specific generated variables modules – further intensifies the complexity. With the release of SHARELIFE, focussing on people's life histories, another dimension of complexity is added. To assist researchers in efficiently using all parts of the database, the documentation concept was revised and is now organized in a three-part documentation structure. First, the revised "*SHARE Guide to Release X*" is designed as the core overview on all aspects of the released data, and is always held up-to-date. Second, to document country specifics, e.g. deviations from the generic questionnaire and their reasons, three interactive "*Item Correspondence"* tools complement the questionnaires, which are of course available in all country/language versions used. Finally, "*tailored user support"* is provided by both, the central and the country specific user-support teams. Besides these three main sources of information on the data, the SHARE homepage additionally contains an FAQ section, a newsletter and a publications archive. In

the latter, complete versions of the previous and current *First Results Books* as well as the methodology volumes can be downloaded.

The *SHARE Guide to Release X* documents the relevant information for directly working with the released datasets. It covers basic information on participating countries, eligibility rules, the additional drop-off questionnaires and vignette studies, as well as general issues on the composition of data sets and types of respondents. More important for data analysis are the chapters on merging the data across different modules and of course across panel waves, and on how to merge SHARELIFE data and the two preceding two panel waves of the SHARE project. Furthermore, the Guide covers the treatment of missing codes, conversion of currencies into comparable Euro values, and the conversion of unfolding bracket questions and of multiple answer questions into "dummy" variable sets. Additionally, the SHARE Guide to Release provides information on specific issues, e.g. the coding of open answer/other questions in various modules, or on how to work with the selected child in the CH module, or the coding of nationality and country of birth. Finally, the multiple documentations on generated variable modules are now integrated into the guide (either as chapter in the main part or as appendix to the guide). One document now holds all information on the additionally generated datasets on weights, imputations, housing, health, social support & household composition, and alive-status. This includes also the documentation of the ISCED, ISCO, and NACE coding.

The most basic part of documentation of a survey project is the originally used *questionnaires*. SHARE provides for all waves and country/language versions the originally used instruments. They come complete with all technical details, i.e. filter rules, interviewer instructions, accepted answer ranges and looping rules. For an easier overview on country specific deviations from the generic questionnaires interactive *Item Correspondence* tools provide structured overviews of deviations within a wave and deviations in the generic version across the waves. These tools are available from the homepage only and can generate custom views on single countries, modules or questions. Currently, there are two cross-sectional correspondence tools available for the two released waves of SHARE (waves 1 & 2) that document country specific deviations; and a third tool for longitudinal changes in the generic questionnaire between these waves. Integrated in these tools are always English translations of all deviations. For single-country deviations from the generic version the respective country team also provides explanatory notes for the specific reasons.

A complementary release of an easy-to-read codebook is planned for the SHARELIFE data for the first time (a simpler version is also available in the appendix to this book). This will mark the final step in the revision of the documentation structure of the whole SHARE-project. Unlike the questionnaire, this codebook will be based on the released data rather than on the CAPI instrument. It then refers to variables as they are actually distributed and thus includes generated variables and documents all editing of the raw data. Apart from that it will preserve features of the questionnaire (question text, interviewer instructions, and, most important, routing information) but presented in a more clearly arranged way. The introduction of a codebook is a response to user

requests as many of them found it hard to trace the elaborate filtering in the original questionnaires.

The third pillar of helping the scientific community to exploit the richness of the data is *tailored user support*. The central database management team in Mannheim as well as all country teams maintain email hotlines. Hence, user support is provided by those members of the SHARE team who implemented the surveys in each country, as well as by those who were in charge of producing the released data versions. The vast majority of user questions are directly answered within less than a week by the central Mannheim team as well as by the country teams. Questions on special issues or on generated datasets are directed to the appropriate team within the SHARE workgroups. SHARE also organizes scientific user conferences. Here, members of the various SHARE teams and researchers are present and provide assistance and comments.

6.7 Concluding Remarks

Any survey has to process data from its raw state coming directly from the field up to the point when they can be released to the scientific community. This process has become easier to some extent with the introduction of more advanced technology, for example the move from paper and pencil interviewing to computer assisted interviewing. In principle, the SHARE data collection effort is conducting the same survey in multiple countries, each of which with its own specific issues and challenges. Combining these multiple surveys into one large enterprise then results in more than just the sum of the parts – both in terms of the outcome for the scientific user and in terms of the data management work involved.

7 Sample Composition 4 Years on: Retention in SHARE Wave 3

Annelies G. Blom and Mathis Schröder

7.1 Introduction

Statistical inference from survey data builds upon the assumption that the analysed sample was drawn from a defined underlying population by means of a probability sample and that all sampled units are actually interviewed and their interview data recorded correctly. In any survey this assumption is violated as a result of survey errors, like coverage, nonresponse, measurement and coding error (Groves et al. 2009, p.48). In recent years, nonresponse error has received considerable attention in the literature due to continuously declining response rates across countries and survey types (de Leeuw & de Heer 2002). An analysis of survey response should therefore be an integral part of any methodological study report.

In a panel survey, like SHARE, where the same respondents are interviewed several times at fixed intervals, survey response consists of two parts: (1) response to the initial survey request and (2) response at subsequent waves, i.e. retention in the panel. The population of the third SHARE wave comprises all persons previously interviewed for SHARE plus their current partners/spouses living in the same household whether previously interviewed or not. (There are a few exceptions to this general rule. For details on the eligible sample see Klevmarken et al. 2005; de Luca and Rossetti 2008.) One should however note that while respondents from wave 2 and respondents who participated in wave 1 but not in wave 2 were eligible to be interviewed for SHARELIFE in wave 3, in many countries there are legal restrictions to re-approaching respondents, who refused in a previous wave. Therefore, only few wave-1-only respondents could be re-approached.

Since no new samples (refresher samples) were drawn for SHARELIFE and thus no initial response rates apply to this third wave, our report focuses on describing the retention in the SHARE panel.

Why is it important to monitor retention in a panel survey? First of all, attrition from the panel might be selective as certain groups of respondents might be more likely to leave the panel than others. In section 3, we thus analyse attrition according to various sub-groups in the SHARE population. Second, analyses of panel data look at continuity and change over time. To conduct such analyses, respondents need to be observed across various points in time. With high attrition rates, however, the number of cases in the panel decreases quickly, thus reducing the base for longitudinal analyses. While the first concern – selectivity due to panel attrition – can be modelled with the information respondents provided at previous wave, the second – panel mortality – decreases the number of observations, which cannot be corrected for.

Survey researchers can implement several measures to minimise attrition in their panel. Such panel care measures include actions to reduce attrition due to a failure to locate the respondent at a next wave, actions that increase the effectiveness of contacting a respondent and actions aimed at reducing reluctance to the survey request (for example Watson and Wooden 2009; Couper and Ofstedal 2009). Measure can include

a) address searches to track respondents who moved between waves
b) collecting so-called 'stable' addresses of the respondent's family or friends, who may give information about the respondents whereabouts
c) sending of birthday and/or season's greetings cards
d) sending information about the outcomes from previous panel waves
e) sending advance letters announcing the interviewer for the upcoming wave
f) offering monetary and non-monetary incentives, which may or may not be conditional participation in the wave
g) employing well-trained, appropriately paid and well-monitored interviewers for the survey
h) designing an interesting questionnaire that engages the respondent in the research

SHARELIFE has taken considerable effort to address all of these measures. However, differences in institutional and legal settings across countries mean that the measures available and the thoroughness with which they can be pursued differ across countries. In addition, methodological research has shown that differences in response and retention across countries are common (see for example de Leeuw & de Heer 2002) and are often attributed to differential survey climates (for example Lyberg & Dean 1992), i.e. differences in the general acceptance of surveys in a country. Thus, differences in the effect of response enhancing measures taken are to be expected. Finally, cross-national surveys pose an additional complication in monitoring fieldwork progress across countries, since communication flows can be slowed down and the effectiveness of control diminished if the interaction between the field interviewers and the monitors in the SHARE central coordination are mediated via the survey organisation, the country operator and the country team leader (see also Koch et al. 2009).

In the following we describe the outcome of these efforts on the retention rates in SHARELIFE. The analyses show that retention rates differed considerably across countries, leading to different sample sizes after wave 3. Subsequently, we look into retention rates by sub-groups of the SHARE population.

7.2 Retention rates in SHARELIFE

When examining retention in a panel survey, first the definition of the retention rates needs to be outlined. In SHARELIFE several different types of retention rates can be calculated. First, one can distinguish between the individual retention rate and the household retention rate. In SHARE wave 1 complete households were sampled and all household members aged 50 and older were interviewed. For refresher samples since wave 2, one person per household is sampled and this person plus their partner or spouse are interviewed. Since the main unit of analysis

in SHARE is the household and to keep retention rates from the wave 1 baseline and the wave 2 refresher samples comparable, the household retention rate is key. However, since many analysts use the SHARE data to observe individuals across time, we also present the individual retention rate here.

Second, retention rates maybe calculated with regards to (a) all persons/households interviewed in wave 1, (b) all persons/households interviewed in wave 2 (including refresher cases in wave 2) and (c) all persons/households interviewed in wave 1 or 2. As mentioned in the introduction, in many countries legal restrictions make it impossible to re-approach wave 1 respondents, who refused to participate in wave 2. In addition, retention rates tend to differ significantly depending on whether the previous wave was the first wave respondents participated in (i.e. whether they were refresher cases) or whether the respondents are regular participants already, i.e. have already participated in two or more waves. Finally, since retention rates need to be considered in relation to the country and sample they are based on, retention rates are reported by country; i.e. no overall or average retention rates were calculated.

To yield the most transparent and comparative retention rate, we thus look into household retention rates from wave 2 to wave 3. We perform the analysis separately for individuals and households that were part of the refresher sample in wave 2, since the retention at the wave after refreshment tends to be different (typically lower) than retention at subsequent wave. Since in Belgium two different survey agencies carried out fieldwork in the Flemish and Walloon parts of the country, we report two rates for Belgium. (Note that in Austria as well as in the Flemish part of Belgium there have been no refresher samples in wave 2. Hence Figure 7.1 and Figure 7.2 do not show any rates in the "Sampled in wave 2" category for these countries.)

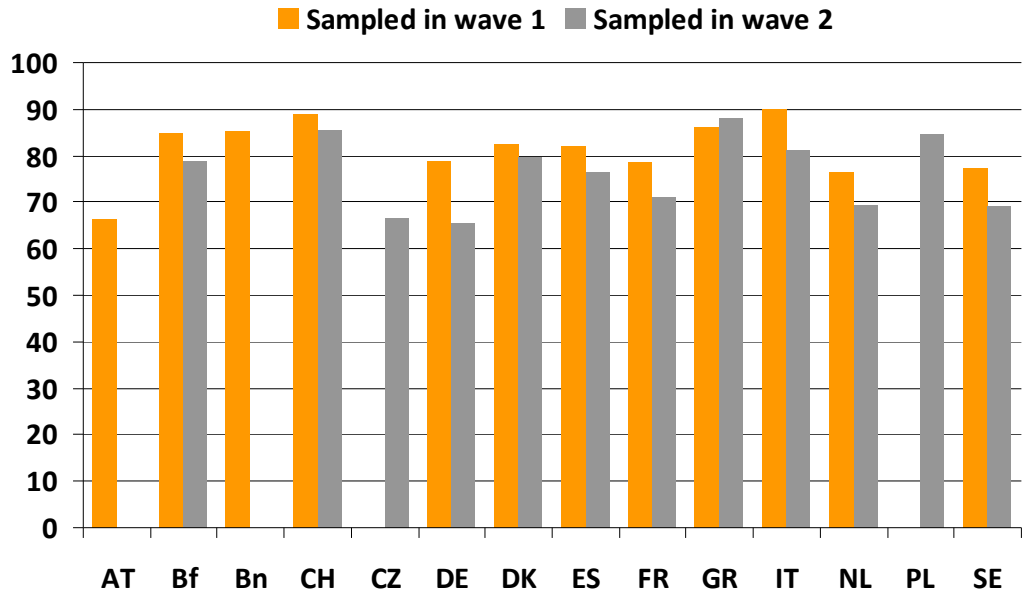

Figure 7.1: Household retention rates across SHARELIFE countries

Figure 7.1 shows the household retention rates for each country in wave 3 separately for sample units first sampled in wave 1 and for sample units first sampled in the wave 2 refresher or new baseline samples. Since the Czech Republic and Poland joined SHARE in wave 2, only the initial retention rate at wave 2 is displayed. The variation in retention rates across countries is considerable due to differences in legal restrictions, fieldwork procedures and survey climate.
Interestingly the individual retention rates (Figure 7.2) differ only slightly from the household retention rates (Figure 7.1). This is due to the large proportion of two-person households in which two interviews or more were completed (82 percent of two-person households across all countries).

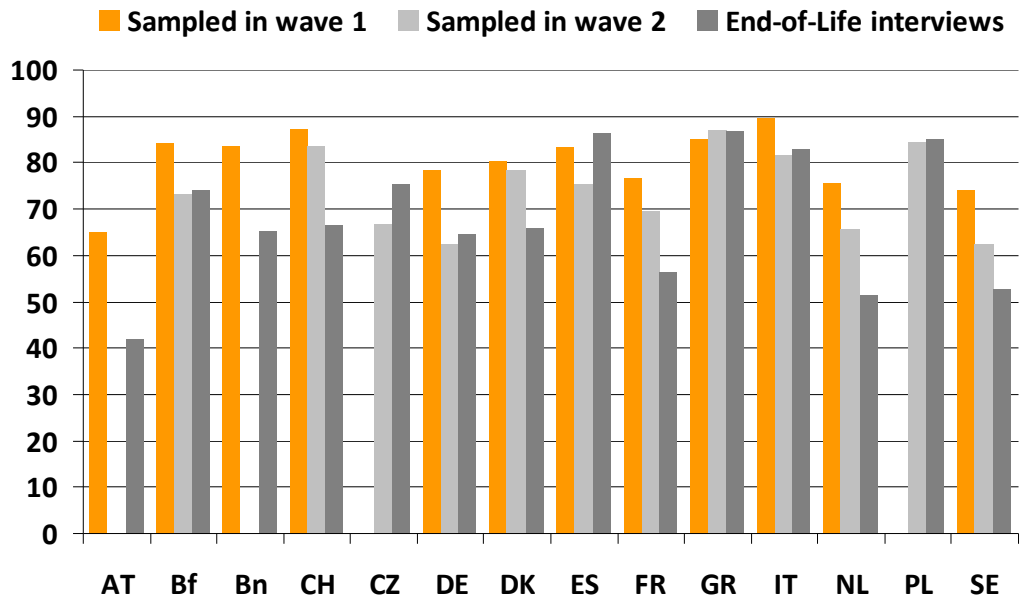

Figure 7.2: Individual retention rates across SHARELIFE countries

Figure 7.2 also displays the percentage of cases in which end-of-life interviews, i.e. interviews with family or friends of a wave 1 or 2 respondent who died, were conducted. These end-of-life interviews are an integral part of the SHARE survey, as they constitute a valuable source of information about the last year of a person's life.

7.3 Sub-group differences in retention

In addition to looking at retention rates across countries, we can examine sub-group differences in retention within each country. In this section we look at differences in individual retention rates from wave 2 to wave 3 by gender and age groups of persons first sampled in wave 1.

Figure 7.3 shows that gender differences in individual retention rates varied across countries, but overall no clear gender gap was detected. Overall, retention was slightly higher amongst women than men.

In a study on ageing, retention rates by age groups are of particular interest. Specifically, amongst the 'oldest old' researchers are often concerned that the mental and physical degeneration of respondents might cause them to suspend their participation in the panel survey. The individual retention rates by age groups presented in Figure 7.4 can somewhat ease this concern. No consistent pattern can be found across countries and in fact in many SHARE countries, retention is actually larger amongst the older age groups.

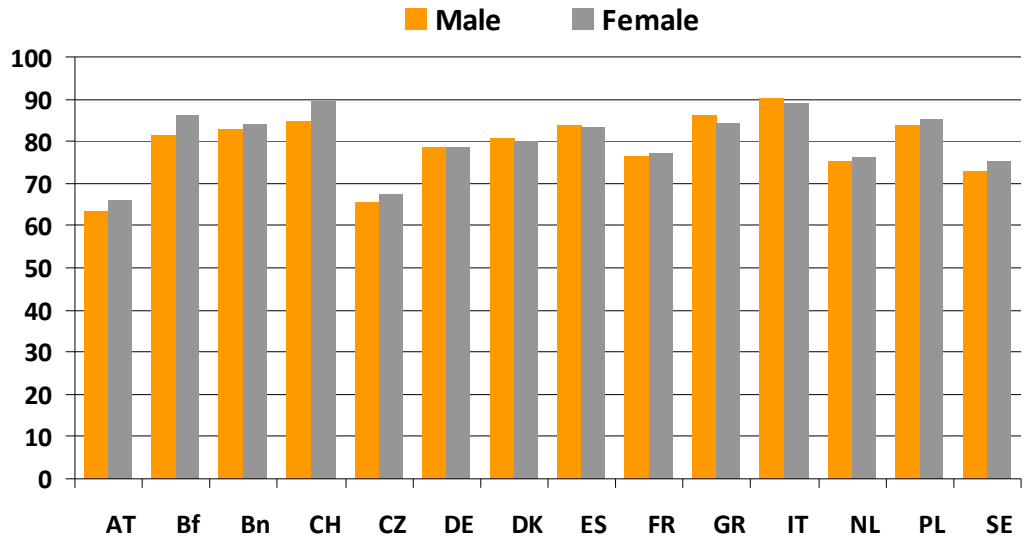

Figure 7.3: Individual retention rates by gender

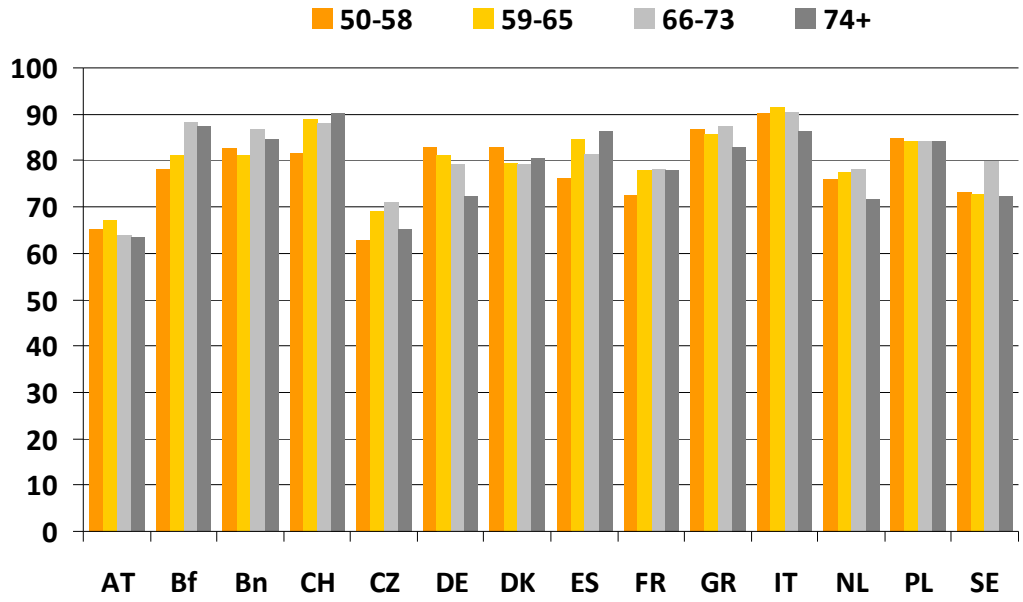

Figure 7.4: Individual retention rates by age group

Thus overall, no consistent gender or age attrition bias was found across SHARE countries. Obviously, more detailed analyses would be needed to rule out such bias completely. However, as mentioned above, since much is already known about attriters from previous wave participation, selectivity due to panel attrition can always be adjusted for in statistical models.

7.4 Conclusion

This chapter provides an overview of the level and nature of attrition in the third wave of the SHARE panel study. We show retention rates for both respondents that were sampled in the initial wave of SHARE and for respondents that were sampled in refresher samples or new baseline surveys in wave 2. Since SHARE interviews the sampled person plus their spouse or partner, both household and individual retention rates can be calculated. The analyses showed that household and individual retention rates were very similar, indicating that the study managed to interview all eligible persons within a household in a large proportion of cases. Furthermore, while retention rates differed across countries, no consistent attrition patterns across gender and age groups were found.

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8 Data Quality: Three Examples of Consistency Across SHARE and SHARELIFE Data

Christelle Garrouste and Omar Paccagnella

8.1 The importance of data accuracy

As shown in the second chapter, memory bias can constitute a serious problem in the analysis of retrospective data. Autobiographical memory research has shown that recalling information is an active reconstruction process that is likely to distort past experiences (Gorin & Stone, 2001; Stone et al., 2004). Recall bias has important implications for the measurement of change over time of individuals as they lead to over- or under-estimation of change. It is therefore important to ascertain the presence and extent of this bias in order to determine the quality of a dataset (Goode, 2007).

The presence of such a distortion depends on the ability and the willingness of respondents to remember past events accurately (ibid.). For instance, certain individual characteristics, such as age and gender, may play a role in the accuracy of responses (Auriat, 1991). But certain busy lifestyles or life circumstances may also play a role. The more events there are to remember, the harder it may be to remember all of them accurately. For individuals who have irregular employment patterns, it may therefore be harder to remember what state they were in at every point in time, as opposed to an individual who has been in steady employment throughout the period in question. Another important factor in this context is the length of time elapsed between the interviews and the events that need to be recalled. Research suggests that there is significant negative effect on recall accuracy, as time elapsed lengthens between interviews (Jürges, 2007; Paull, 2002). Moreover, the importance that respondents attach to the event they are being asked to recall and/or its social desirability also plays an important role. For instance, using the British Household Panel Survey data, Paull (2002) found that shorter spells of unemployment are less likely to be recalled than other types of spells. Moreover, in the health economics literature, self-reported health is often said to suffer from "justification bias" in that persons who are unemployed tend to overstate how bad their health is in order to "justify" their unemployment (Crossley & Kennedy, 2000).

There are two main methodological streams in the literature to measure recall bias. The first one consists in assessing basic memory processes in the laboratory, revealing factors influencing memory in general, like the affective valence effect (i.e. information with positive affect is more easily remembered than that associated with negative affect) and the mood congruent memory effect (i.e. current mood state facilitates the processing of material with a similar emotional valence and impairs the processing of material with the opposite valence) (Kennedy et al., 2004). This research stream has for instance revealed differences in recall accuracy between sick and healthy respondents (Ebner-Priemer et al., 2006). On the other hand, the second approach is referred to as "ecological

momentary assessment" or "experience sampling method" and defines recall bias as the difference between the multiple momentary ratings assessed at specific moments in time and the retrospective rating of the same period of time.

Usually, the main difficulty with this second approach is the availability of an objective source of data or information against which to compare survey responses. Moreover, another difficulty lies in that there is no guarantee that respondents will respond in the same way for the same event in subsequent interviews despite the fact that they are being asked to recall the exact same previous event(s) in every interview (Goode, 2007). For example, a respondent may give one answer in *t* and another answer for the same event in *t+1* (Horvath, 1982). It is therefore important to be aware of the extent to which people make 'mistakes' and whether these 'mistakes' are made randomly or not. For instance, if the same or same types of people are consistently recalling the same thing 'wrongly' in the retrospective survey and in the longitudinal panel data over time, this will introduce systematic recall bias in the data, which will be harder to deal with than if the error is committed randomly.

The structure of the SHARE survey allows us to compare responses from its retrospective data (i.e. SHARELIFE) to responses from SHARE wave 1 and SHARE wave 2 for the same individuals on several common indicators. This exceptional setting allows us to assess the quality of the sample by both ascertaining whether recall bias is present in the data and whether this bias is random or systematic. For the purpose of this chapter, we have chosen to exemplify the strategy by using three main variables referring to events contemporary to SHARE wave 1 or SHARE wave 2, namely the employment status, the presence of a cohabitating spouse and the number of children alive. These variables were retained because they allow investigating recall bias in different fields (economic, social networking, demographics), and represent common types of events tested in the literature on memory effect (e.g., Poulain et al., 1992; Goode, 2007).

Indeed, variables on labour force participation are commonly identified as a major source of recall bias when collected retrospectively. For instance, Goode (2007) investigated the employment recall bias in reported events across the five first waves of the survey on Household, Income and Labour Dynamics in Australia (HILDA). The results from the descriptive analysis and multivariate analysis show that there is systematic employment recall bias present in the HILDA data. Out of all respondents, some 30% make more than one mistake. The probability that a respondent makes any mistake is statistically significantly associated with being in full time education, the number of children, the number of jobs in the last financial year, possibly the time elapsed between interviews and the number of jobs reported in the employment calendar. Overall, the most important factor associated with the recall bias is the employment state that individuals are in at interview *t* and interview *t+1*. Further, factors associated with the probability of an individual making a mistake will change, both in magnitude and direction, depending on their exact employment state at interview *t* and interview *t+1*.

Using the German Socio-Economic Panel (GSOEP) study, Jürges (2007) compared current and 1-year retrospective data on unemployment. He found that 13% of all unemployment spells are not reported one year later, and another 7% are misreported. He also showed that the ratio of retrospective to current unemployment increased in recent years and is related to salience of unemployment measures such as the loss of life satisfaction that is associated with unemployment. This result is consistent with evidence on retrospective bias found by cognitive psychologists and survey methodologists (affective valence effect). Individuals with weak labour force attachment, such as women with children or individuals who are close to retirement, have for instance the greatest propensity to un-report unemployment retrospectively.

Mathiowetz and Duncan (1988) drew on Panel Study of Income Dynamics (PSID) validation data and compared individual respondent reports with company records. They found that two-third of spells remain unreported and that a strong negative relationship exists between the length of spell and the degree of under-reporting (i.e. the shorter the period of the unemployment spell the higher the probability of under-reporting). This result is confirmed by Manzoni et al. (2009) using the GSOEP data and comparing it to the German Life History Study. They also found that the lower transition rates reported in the life-course study can be explained by short spells recall bias.

Moreover, Elias (1997) compared unemployment rates calculated from 9-year employment biographies from the British Household Panel Survey with corresponding unemployment rates from the British Labour Force Survey. The results showed that under-reporting becomes serious if a spell dates back more than 3 years, which contradicts the result by Mathiowetz & Duncan (1988) that the length of the recall period is not significant. Elias (1997) also found that men under-report less than women. This last result about cluster differences in employment recall bias confirms earlier findings by Akerlof & Yellen (1985), comparing the US Current Population Survey and its annual supplement on work experience, the Work Experience Survey, who found differences both by gender and by age group (with men and older respondents under-reporting less than women and younger respondents).

Furthermore, the literature provides also evidence of the existence of recall bias in social network variables related to the respondent's children and their marital status. The degree of bias varies, however, a lot across countries. Comparing responses from a retrospective life history survey, the 3B-B Survey by INED-UCL, and the Belgian Population Register, Poulain et al. (1992) show that errors of reporting were found even for life vital events (such as birth, marriage, divorce, death, as well as the birth of children living or having lived in the household). In all cases, these recall biases varied significantly by gender with, for instance, only 2% of error for women vs. 7.2% for men on the report of the date of birth of children and only 1% of error for women vs. 7% for men on the report of the date of marriage. In both cases, some of these mistakes could be corrected during the joint interview. Looking at the annual U.S. National Longitudinal Survey of Work Experience (NLS) and its retrospective modules of 1978 and 1983, Peters (1988) checked for the accuracy of the changes in marital status.

Taking the “at-the-time” recordings of the panel data as the true data, Peters found a concordance between the panel and the retrospective data of only 76%. The main determinants of the recall error were found to be the time distance between interview and event (positive correlation) and the level of education (negative correlation).

Hence, given the evidence-based increased risk of recall bias in the retrospective surveys and given the length of the recall period covered by the SHARELIFE survey (i.e. at least 50 years), we aim at assessing the quality of the SHARELIFE data exemplified by investigating the extent to which SHARELIFE respondents remember three of their past events (in)correctly.

8.2 Data and descriptive results

This analysis compares SHARELIFE data with the information collected in the respondent’s first completed SHARE interview. Thus, in case of respondents having completed both wave 1 and wave 2 surveys, we compare wave 1 and SHARELIFE data. This leads to a potential sample composed by 16870 wave 1 respondents and 9875 wave 2 respondents (both based on the first internal release of the SHARLIFE data). In this section we aim at testing for recall bias by comparing contemporaneous information collected in one of the SHARE waves with retrospective information collected in SHARELIFE.

We focus our analysis on three different types of collected information, covering economic, demographic as well as social networking areas: being married and living together with a spouse; being a worker (employee or self-employed); and the number of (any) children being alive of singles (to focus on singles is necessary, because in waves 1 and 2, only one member of the couple is asked about her/his children).

These variables highlight the living condition of respondents at the time of the first completed SHARE interview and are collected through a direct question (“What is your marital status?”, “In general, which of the following best describes your current employment situation?”, “How many children do you have that are still alive?”, respectively). In SHARELIFE this information is collected through a life history approach that allows reconstructing, for instance, relationship and job spells over the whole life of the respondents.

The analysis is restricted to the subsample of SHARE respondents that report the characteristics under investigation. Therefore, recall bias in SHARELIFE is tested by comparing whether the individual history spells on marriage, employment status and children includes the year of the SHARE interview or not. An *error* (recall bias) is defined as a dummy variable equal to 1 when the event is not recorded correctly in SHARELIFE.

These restrictions on the definition of the variables of interest imply different sample sizes for each of them out of the 26745 potential observations: being married and cohabitating with the spouse (N=19165), having a job (N=8281) and the number of living children for singles (N=4857).

Table 1 reports the sample composition and the percentage of errors for each of the three variables, by wave and gender. Overall, the table reveals good results

and, as expected, the percentage of recall bias is larger when comparing SHARELIFE with wave 1 than with wave 2 (the longer the time elapsed between interviews, the greater the percentage of recall bias).

Table 8.1: Percentage of error across gender

	Wave 1					
	Sample composition			Percentage of error		
Variable	Total	Men	Women	Total	Men	Women
Being married (living together with spouse)	11941	5810	6131	1.58	1.48	1.68
Having a job	5054	2616	2438	7.7	5.31	10.25
Number of living children for singles	3177	718	2459	10.26	12.26	9.68

	Wave 2					
	Sample composition			Percentage of error		
Variable	Total	Men	Women	Total	Men	Women
Being married (living together with spouse)	7224	3516	3708	1.05	0.97	1.13
Having a job	3227	1656	1571	6.38	4.89	7.96
Number of living children for singles	1680	368	1312	8.15	10.87	7.39

While being married and living together with the spouse shows very low rates of recall biases for both waves (1.58% in wave 1 and 1.05% in wave 2), men appear to remember relationship spells slightly better than women (1.48 vs. 1.68% of errors in wave 1 and 0.97 vs. 1.13% in wave 2). However, this result does not take into account the different sample compositions by age. As highlighted in Figure 8.1, we find that errors are more equally distributed across age classes for women than for men (where the less than 50 year-olds inflate the error propensity by almost 0.2 percentage points in each wave). Surprisingly, for both men and women, recall accuracy increases with age. Moreover, the Netherlands appears to be the main contributor to the magnitude of this recall bias (without this country the overall percentage is lower than 1% in each wave).

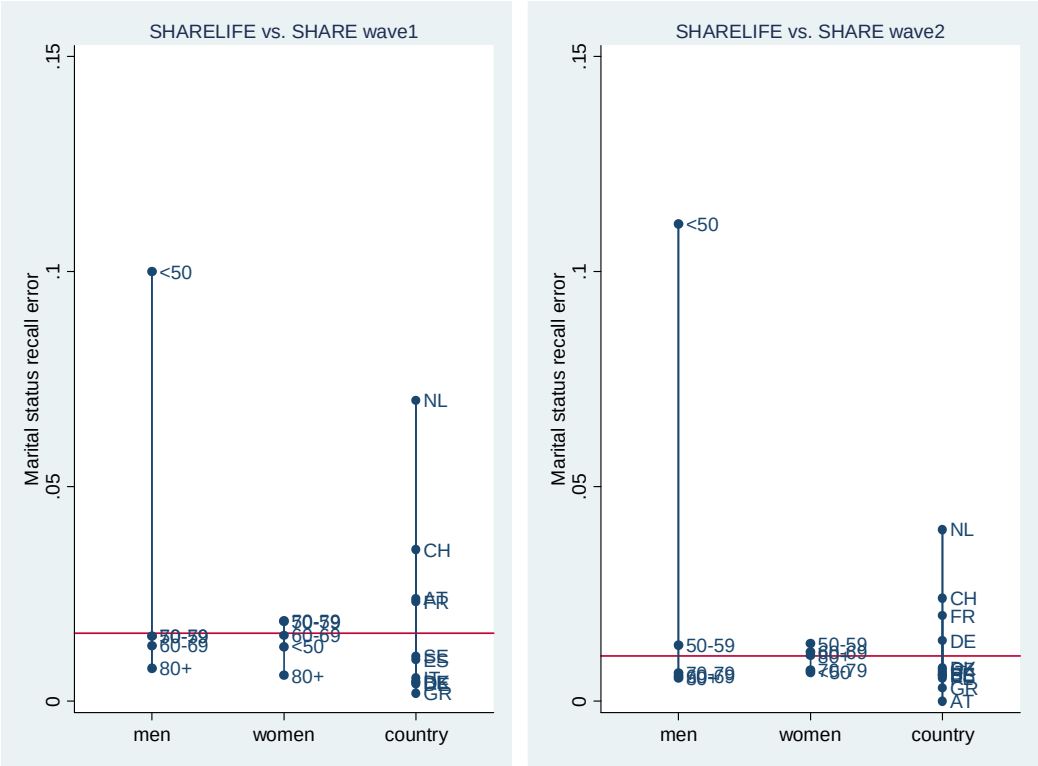

Figure 8.1: Recall bias on marital status

Recall biases for jobs are larger than the ones related to marriage (7.7% and 6.4% comparing wave 1 and wave 2 data respectively). However, these results may overestimate the true percentage of bias because of some slight differences in the definition of the employment status used by SHARE and SHARELIFE surveys. On the one hand, SHARE asks for a self-evaluation of the current regular employment status in wave 1 and 2 (question EP005_). If the respondent does not declare her/him-self employed or self-employed (including working for family business) in question EP005_ then question EP002_ is asked ("Did you do nevertheless any paid work during the last four weeks, either as an employee or self-employed, even if this was only for a few hours?). Hence, in SHARE, the focus is on capturing any paid work, regardless of the length or type of work. On the other hand, SHARELIFE collects information on every paid job that lasted *at least 6 months*. In order to reduce the potential discrepancies between surveys, in SHARE we consider a respondent as a worker only when he/she defines him/herself as a regular employed or self-employed (question EP005_). This definition however implies losing respondents who defined themselves differently from employed or self-employed (e.g. retired), but who still might have had a paid job that lasted for at least 6 months.

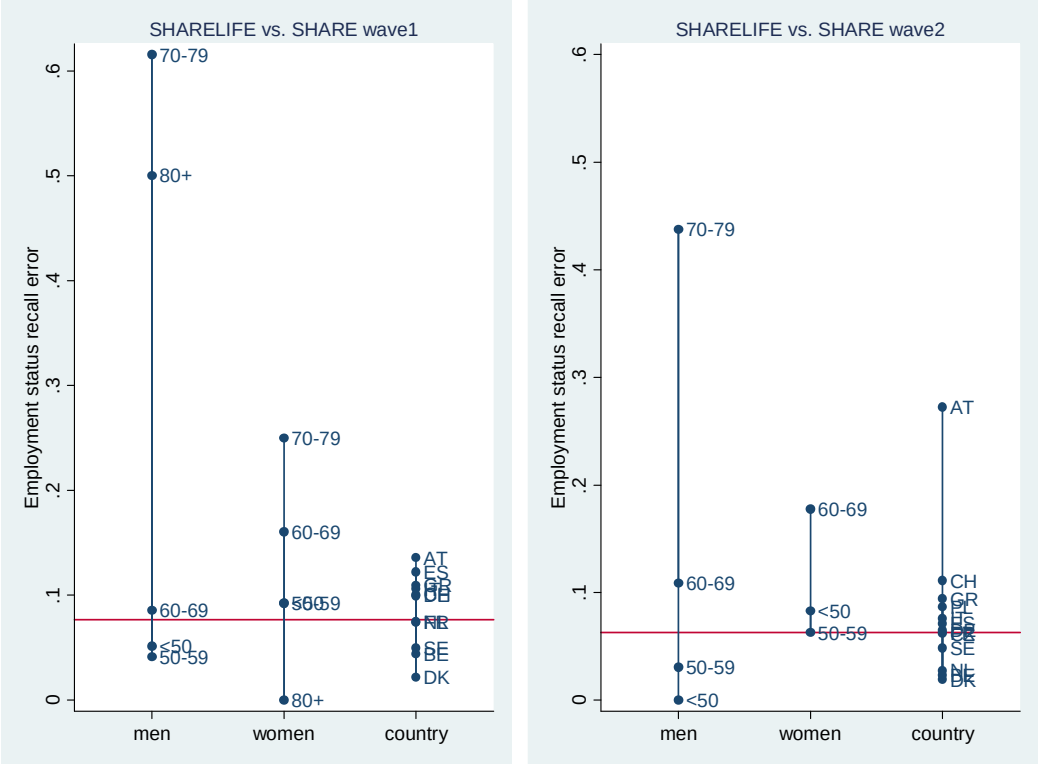

Figure 8.2: Recall bias on employment status

Table 1 confirms that the recall bias in employment is stronger for women than men (10.25% vs. 5.31% in wave 1 and 7.96% vs. 4.89% in wave 2). When looking at the age distribution of this bias by gender (Figure 8.2) we notice that it increases with age. These results support the idea of an overestimation of recall bias, since women and workers older than 65 years old are more likely to have a paid job even though retired or homemaker. When looking at the distribution of frequency of errors across countries, we see that Denmark, Belgium, the Netherlands and Sweden recall on average better this event than Mediterranean countries, Switzerland and Austria. It is also interesting to note the stability over time of these percentages for Nordic Countries.

Finally, the findings on recall bias with regard to the number of living children for singles show the worst performances. However, similarly to the job history, collection of the number of living children might suffer from some discrepancies between surveys. While in SHARE the number of children counts all natural children – fostered, adopted and step-children – and also includes any children of the spouse or partner, in SHARELIFE only information on natural and adopted children are collected, addressing these questions to each respondent. The choice of considering only those respondents who lived as a single at the time of the SHARE interview is expected to limit the effects of these potential discrepancies, but the difference in asking the question is likely to cause an upward bias (i.e. more children being mentioned in wave 1 and wave 2 vs. SHARELIFE). Indeed, when looking at the size of the error, about 75% of the differences are positive, and about one third of these are off by one child.

The largest percentage of errors is due to women, but these results do not take into account the fact that men constitute only one fifth of this sample. Figure 8.3 disentangles the sources of these errors, showing that recall biases are actually mainly due to men. An other interesting result is the lack of any age-gradient (especially when comparing SHARELIFE with wave 2): younger respondents have recall bias percentages close to the ones reported by older respondents. Moreover, this indicator shows a large cross-country variability. Spain and Austria (not reported for wave 2 because of a small sample size) are again the main contributors to the magnitude of this recall bias. Italy performs best when comparing SHARELIFE with wave 1 and worst when comparing with wave 2, while the opposite relationship applies for Germany and Greece.

In view of these results, it would have been interesting to further investigate the role played by individual characteristics in the probability of these recall errors through the estimation of some multivariate models. However, the low percentage of errors, particularly for being married, prevents us from doing such analyses. Instead, some logistic regressions on the accuracy of the number of living children for singles and of the employment status have been estimated, but their results provide very little information since almost all variability is captured by country dummies. Multivariate regression analysis was applied to analyze the probability of occurrence of an error, estimating a logistic regression model on two of our focus variables (i.e. employment status and number of living children) and defining a dummy variable equal to 1 when the year of the event is recorded in SHARELIFE differently than reported at the time of occurrence, i.e. in SHARE wave 1 or SHARE wave 2.

With regard to the accuracy of the number of living children for singles, we find that being a man and having several children increases the propensity for recall errors. With regard to the accuracy of the employment status, we find that the propensity of recall errors in relation to wave 1 is higher for low educated young women with a fair or poor health status at the time of the SHARE interview, having been married several times and with very few employment spells. The same inferences apply to the recall bias in relation to wave 2, except for the fact that the number of marriages is not significant anymore and is replaced by the number of children (positively and significantly correlated to recall bias). In none of the logistic regressions did the socio-economic status of the respondent, the mental health nor the memory capacity of the respondents explain variability in recall errors.

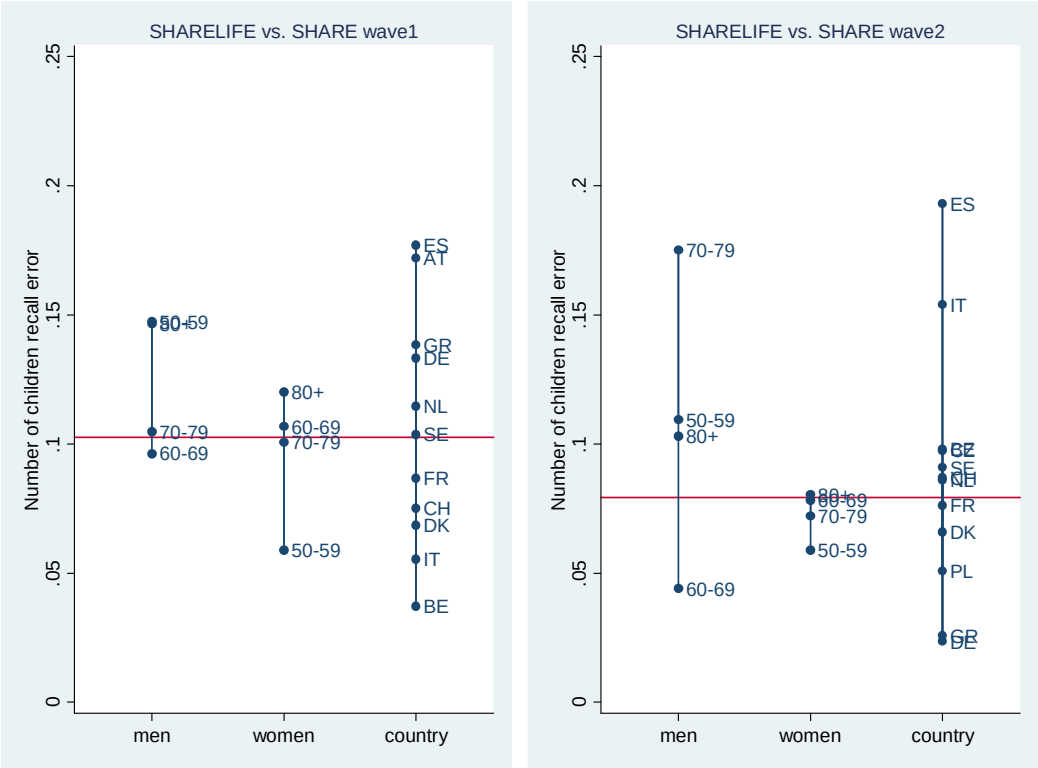

Figure 8.3: Recall bias on number of children of singles

8.3 Final remarks

The reliability of any retrospective survey is based on the accuracy of this collected information. Several studies have tested the presence of recall biases in various contexts of these surveys, such as unemployment spells (Akerlof and Yellen, 1985; Jürges, 2007) or health conditions (Lungenhausen et al., 2007).

The goal of this chapter is to provide a first sight at the quality of SHARELIFE data, investigating the main determinants of recall biases in this retrospective survey. To this aim, information collected independently and in different ways from SHARE and SHARELIFE on some personal events was linked and consistencies between the two surveys were evaluated. In particular, the focus was on an event in each of the following categories: demographics (being married and living together with the spouse), economic status (being employed or self-employed) and social network (the number of living children for singles).

The main result of this analysis is that SHARELIFE data is overall strongly consistent with the information reported at the time of occurrence of the events (with less than 10% recall errors over all events). When investigating further the distribution of the recall bias, we find that gender, age and family status are the main determinants in the recall capacity, which confirm the main findings underlined by the literature. While we find that busy lifestyles or life circumstances, e.g. number of marriages, appear to play a significant role (the more events there are to remember, the harder it may be to remember all of them

accurately), educational attainment is an important determinant only in the recall accuracy of employment status.

Recalling the number of living children shows the largest biases, especially among men. Overall, the data reveals large cross-country variability in recall bias, and, within some countries, even large cross-wave variability. Spain and Austria are the countries with the largest and most systematic biases. Nevertheless, our findings should be used with caution, particularly because in some cases the information collected in SHARE and SHARELIFE is not exactly the same. Further information needs to be taken into account in the analysis to better isolate the main sources of recall errors, particularly some country-specific characteristics like interviewer effects or information on the time length between the two interviews.

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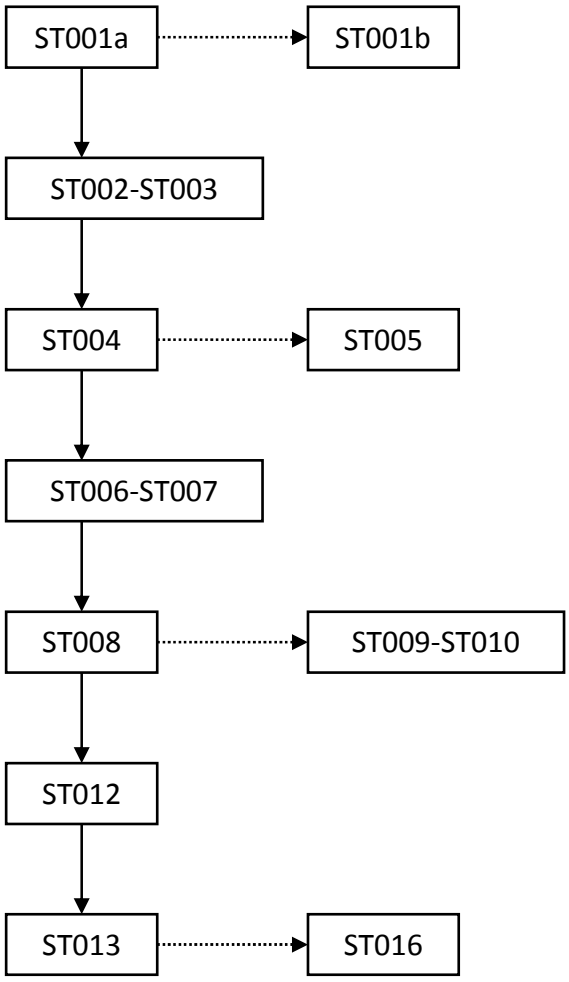
APPENDIX

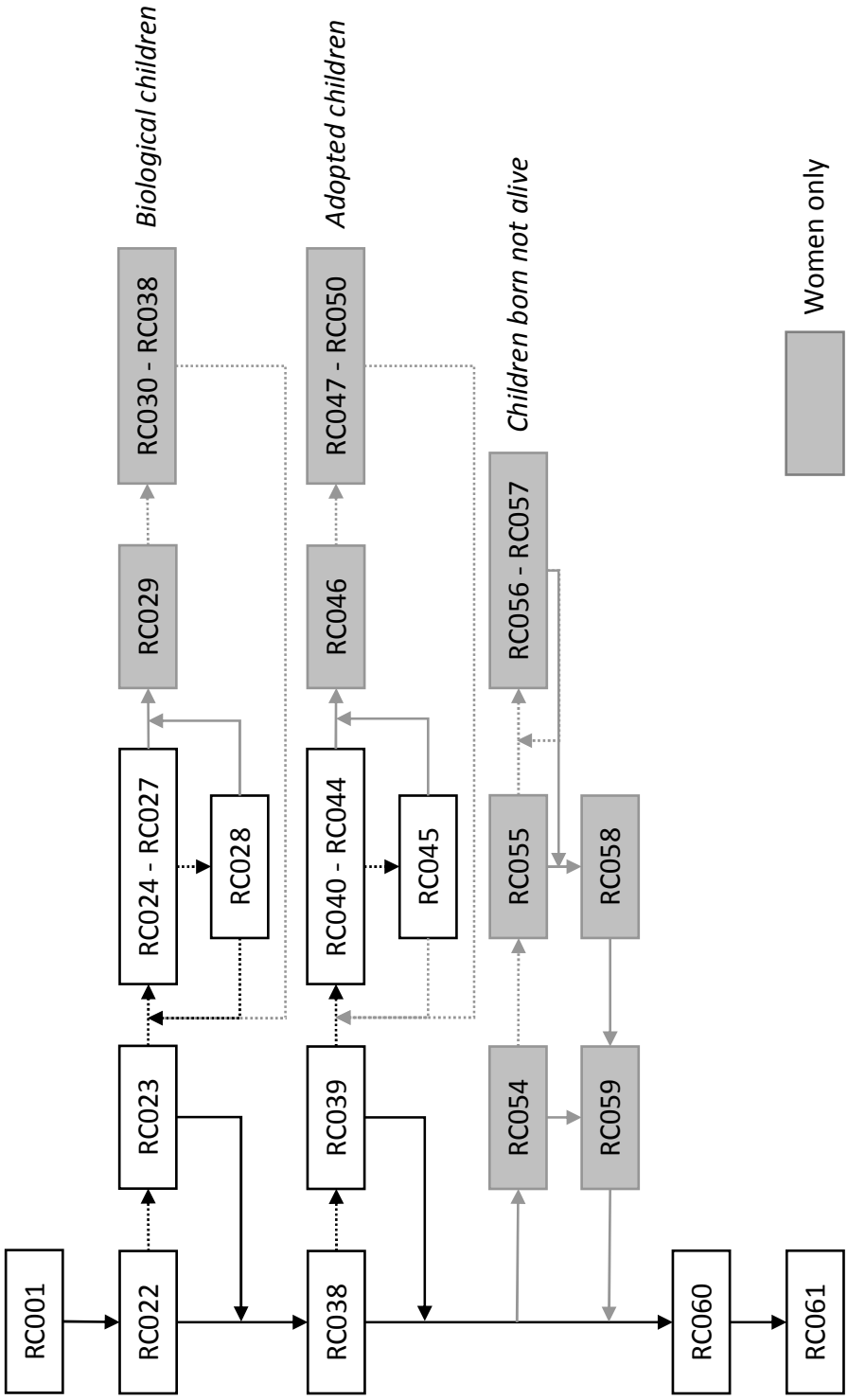
Questions from the SHARELIFE Questionnaire
(In the Order of Appearance)

Questionnaire Flow for all Modules

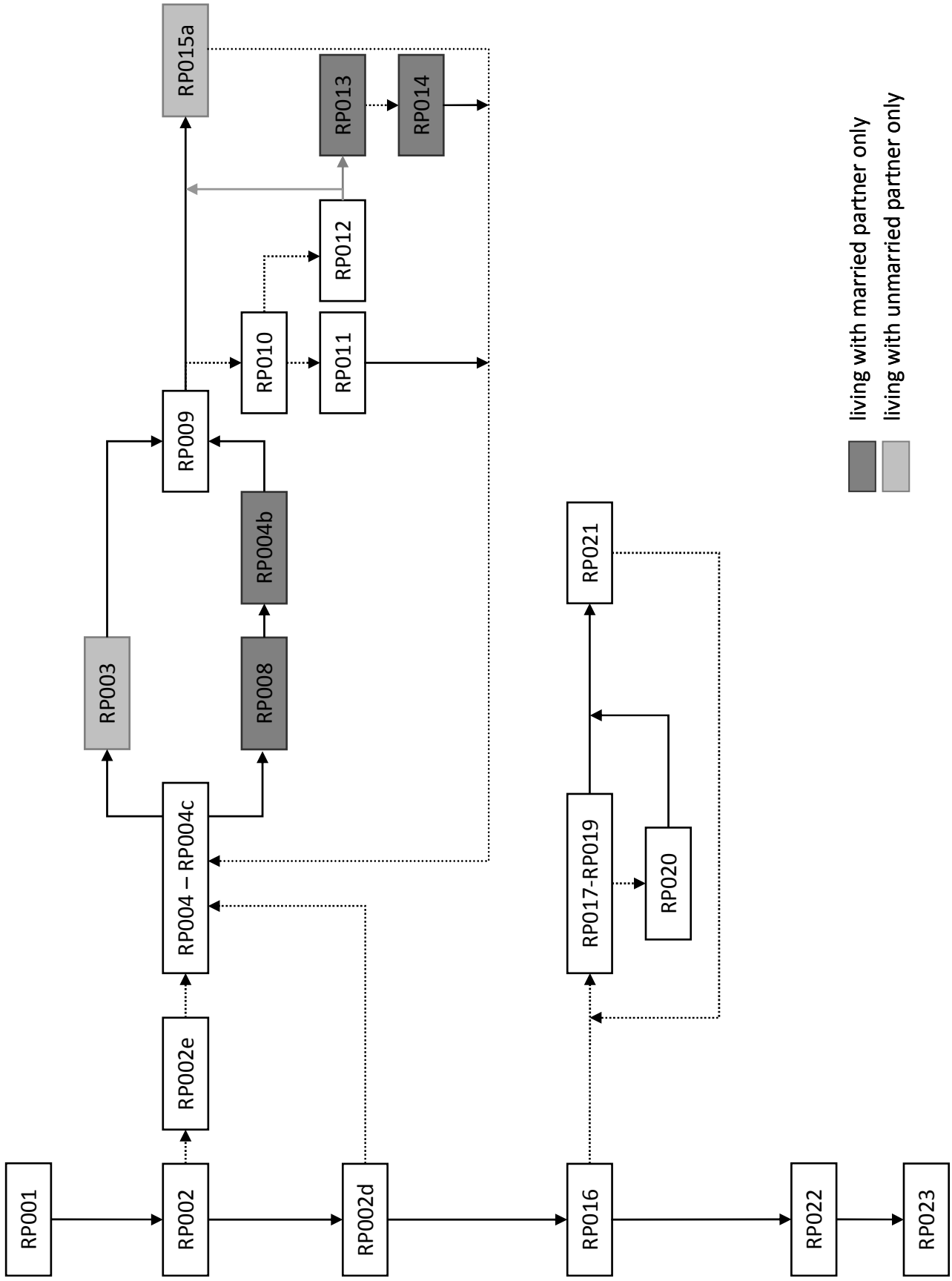
ST-Module: Starting Module



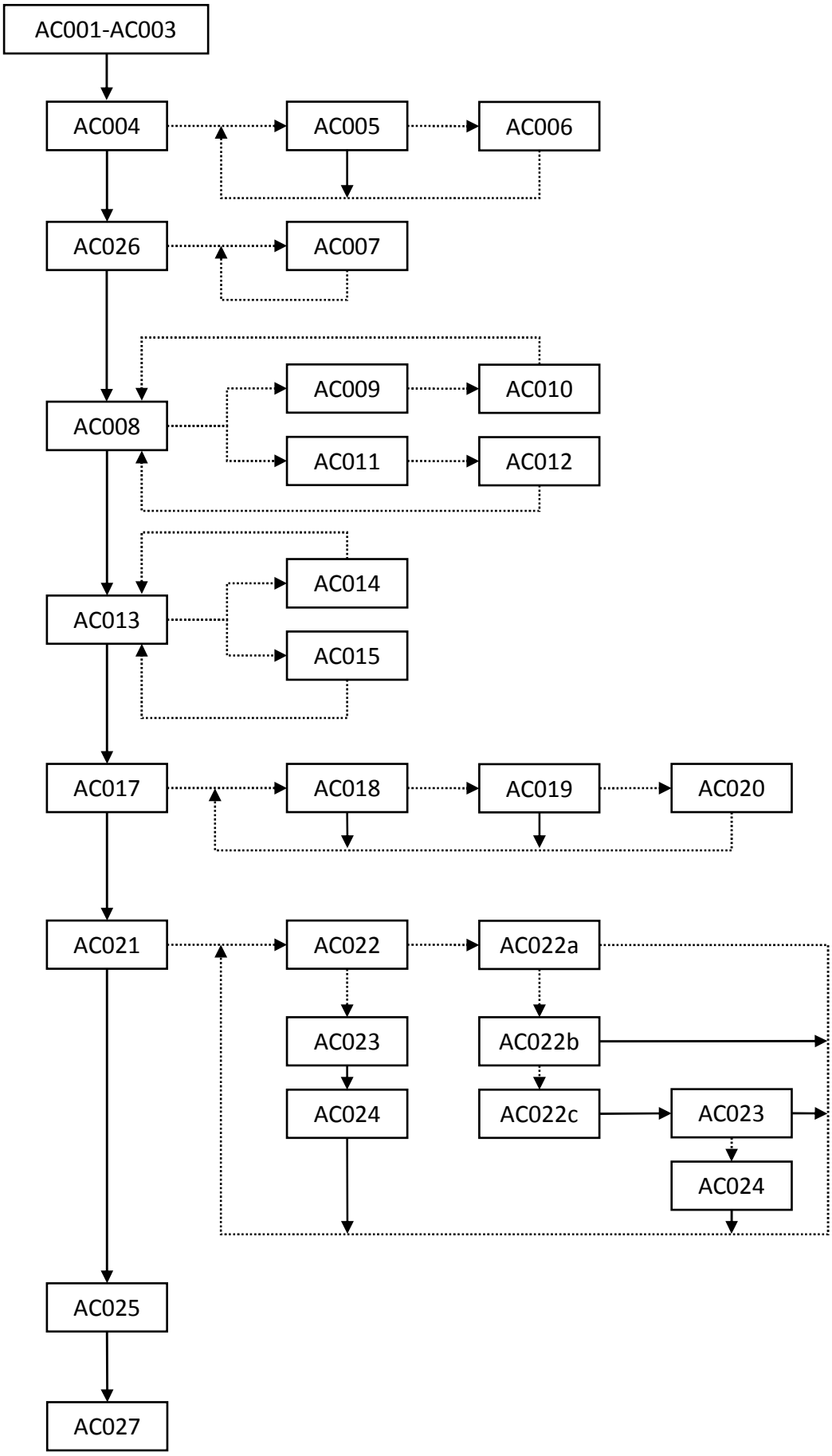
RC-Module: Children History



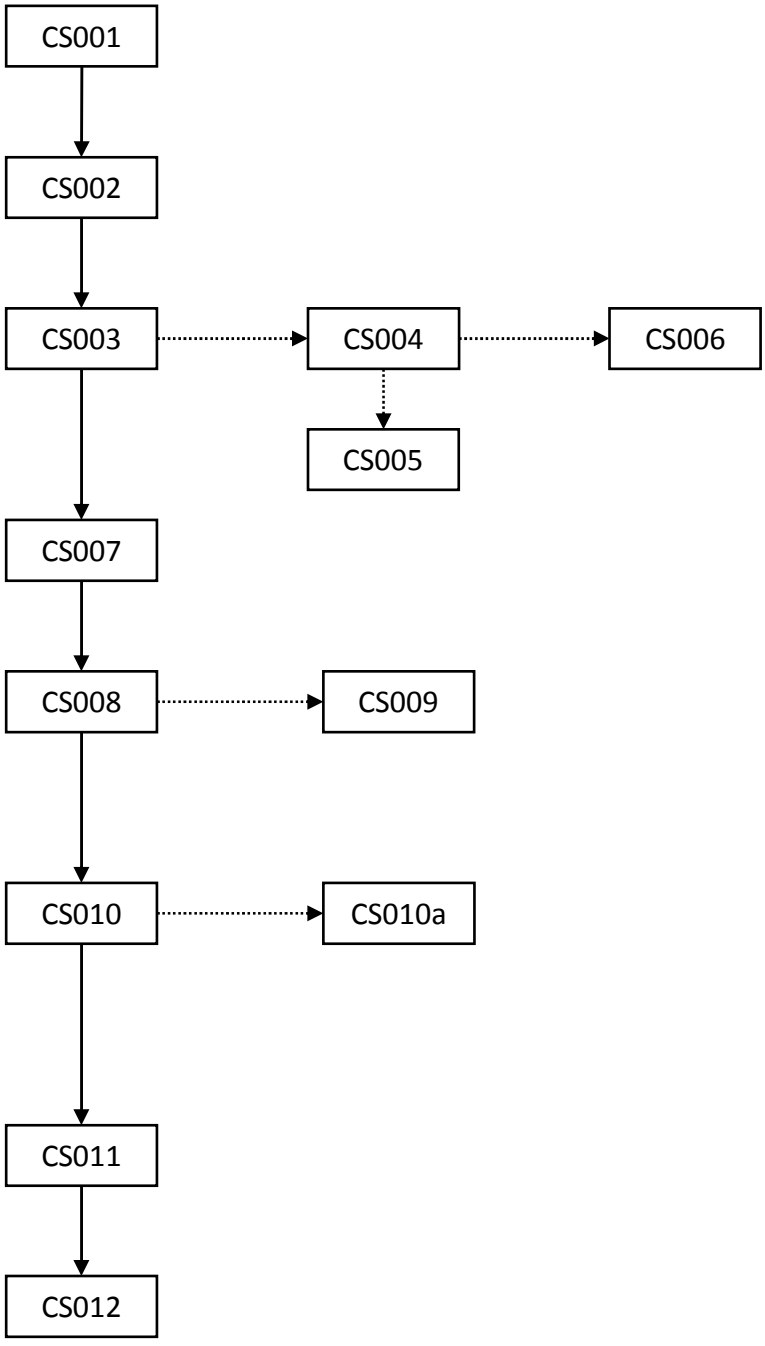
RP-Module: Partner History



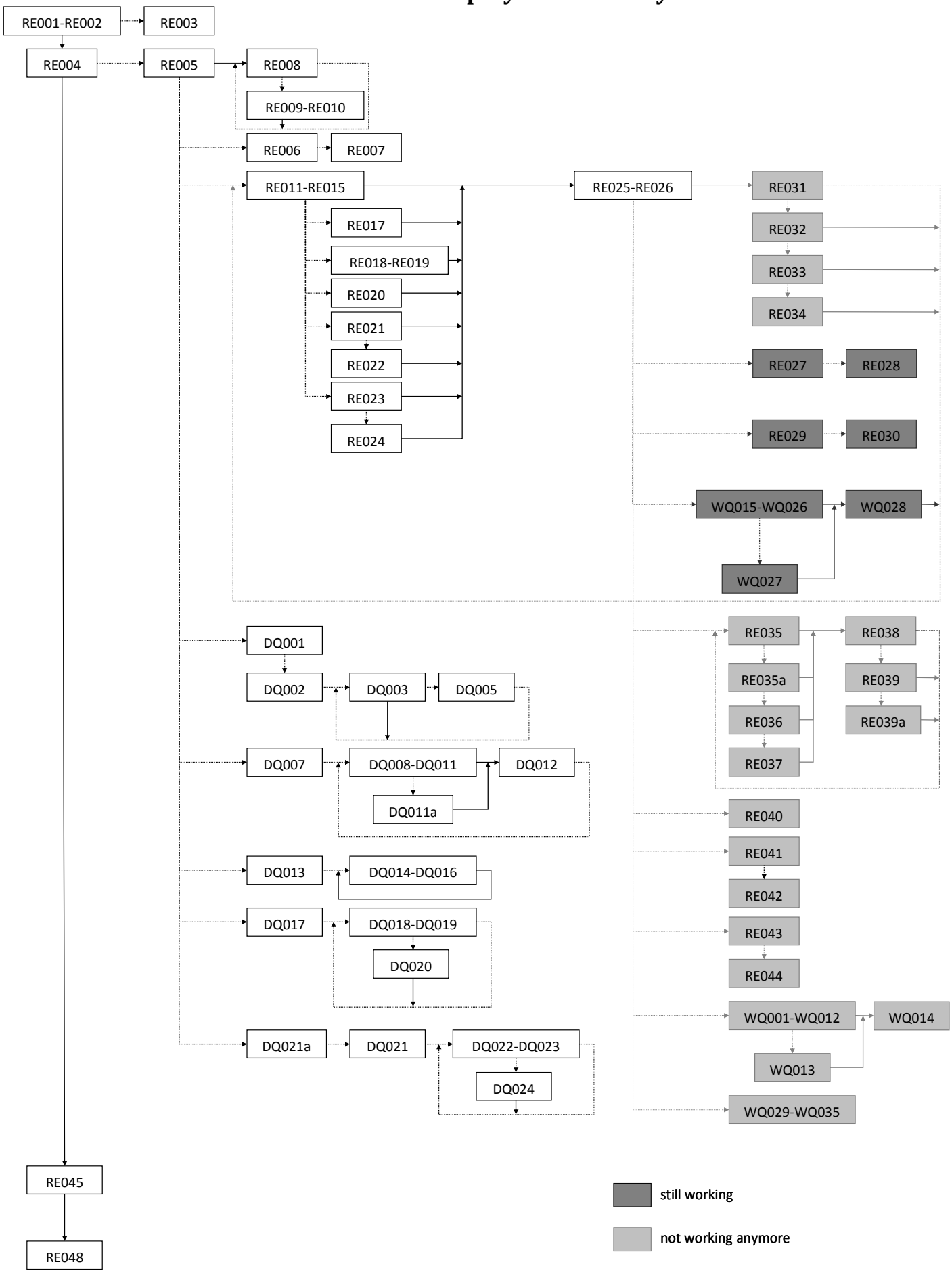
AC-Module: Accommodation History



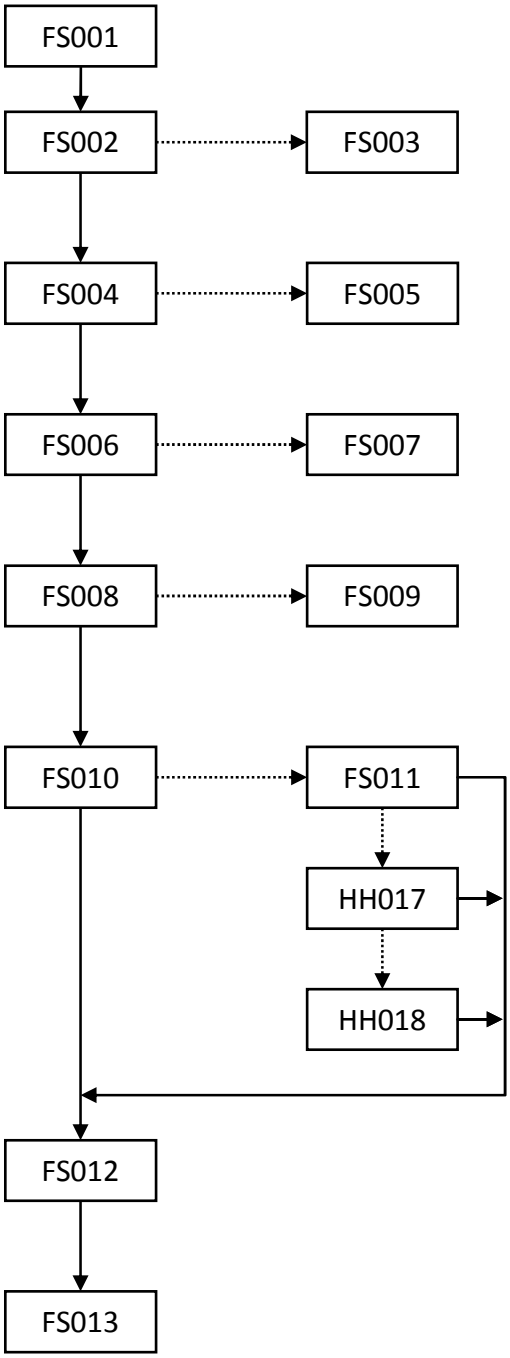
CS-Module: Childhood History



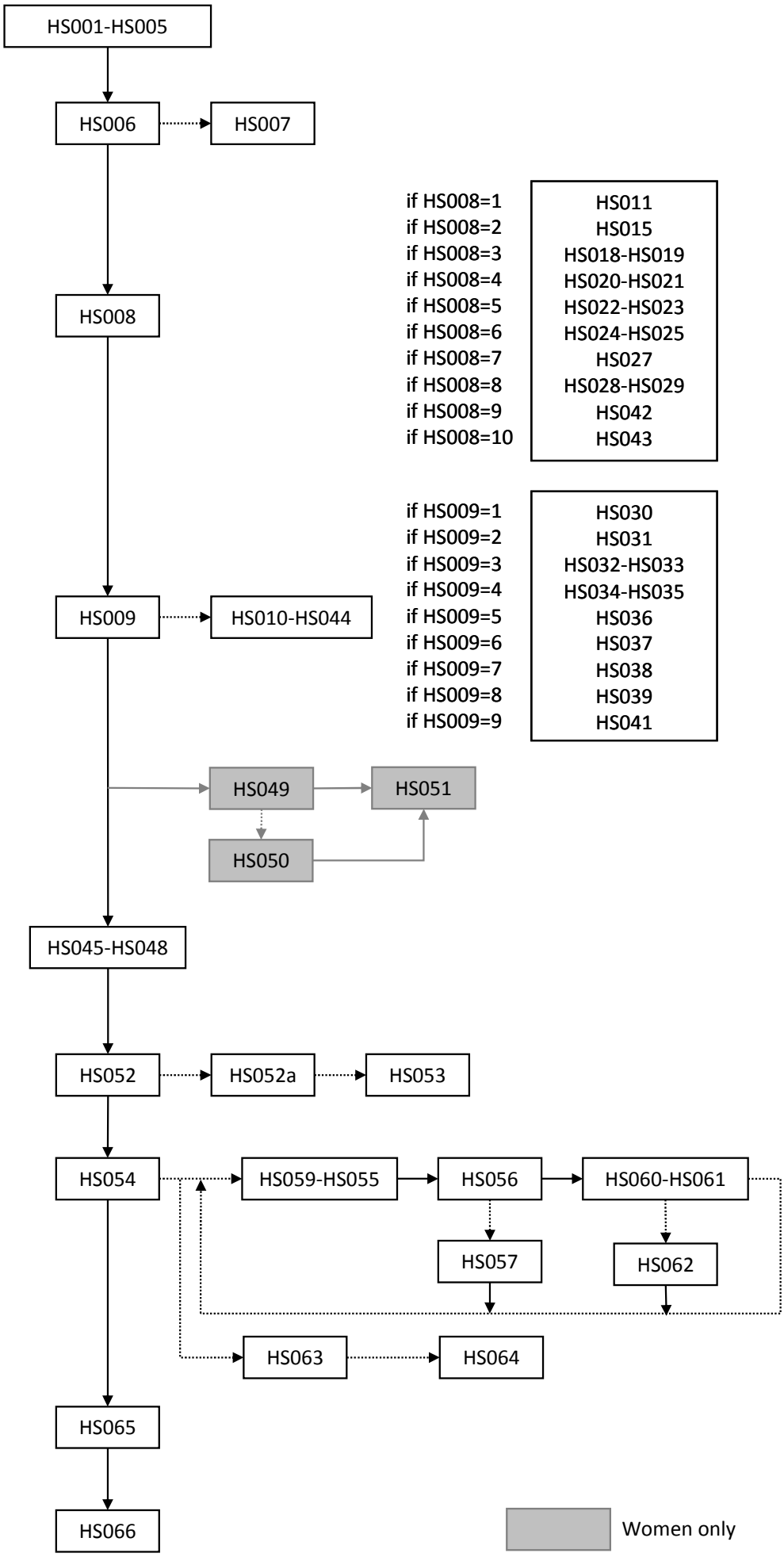
RE-Module: Employment History



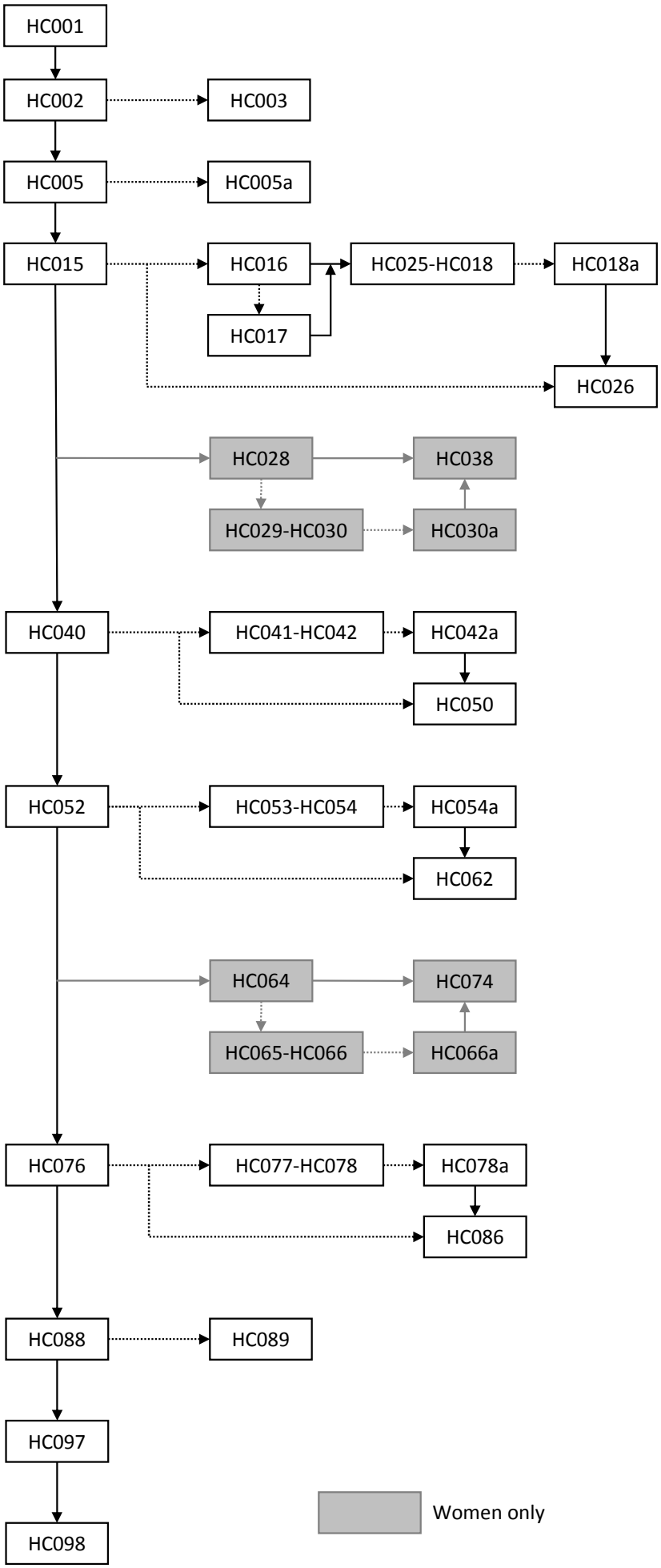
FS-Module: Financial Investment History



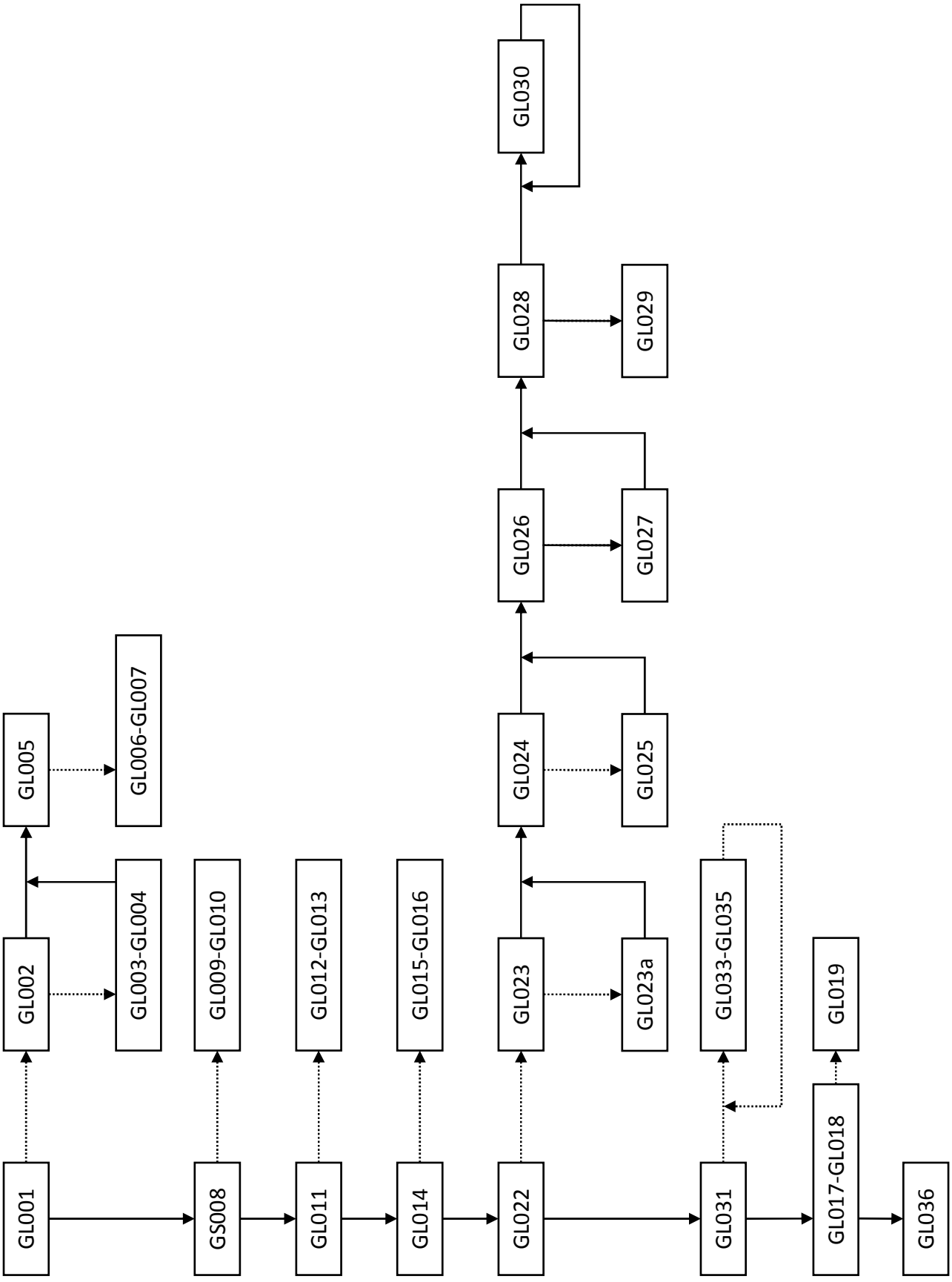
HS-Module: Health History



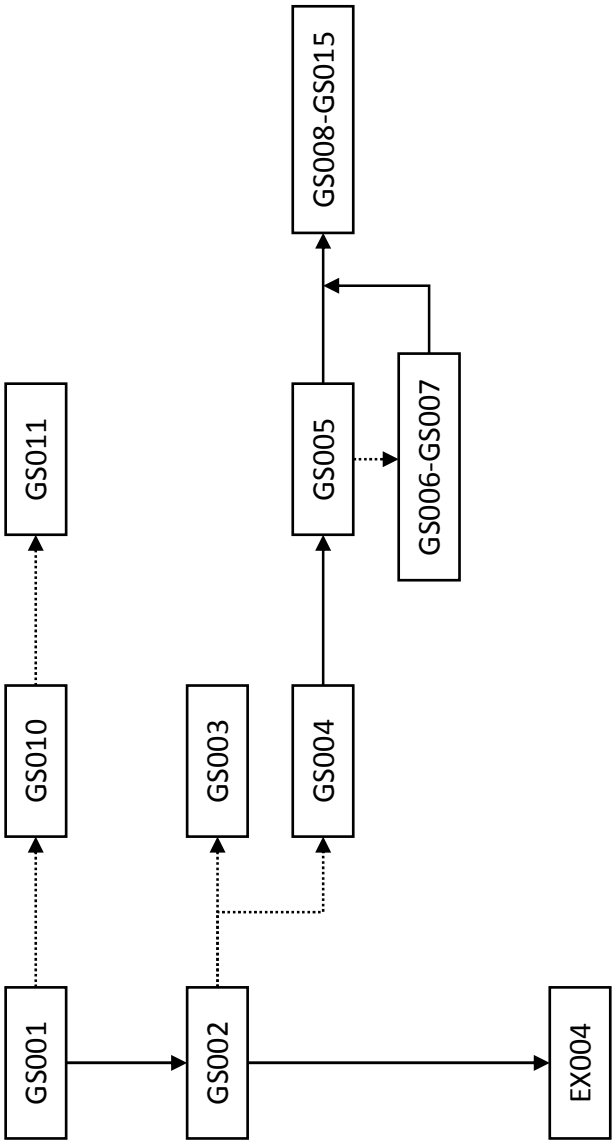
HC-Module: Health Care History



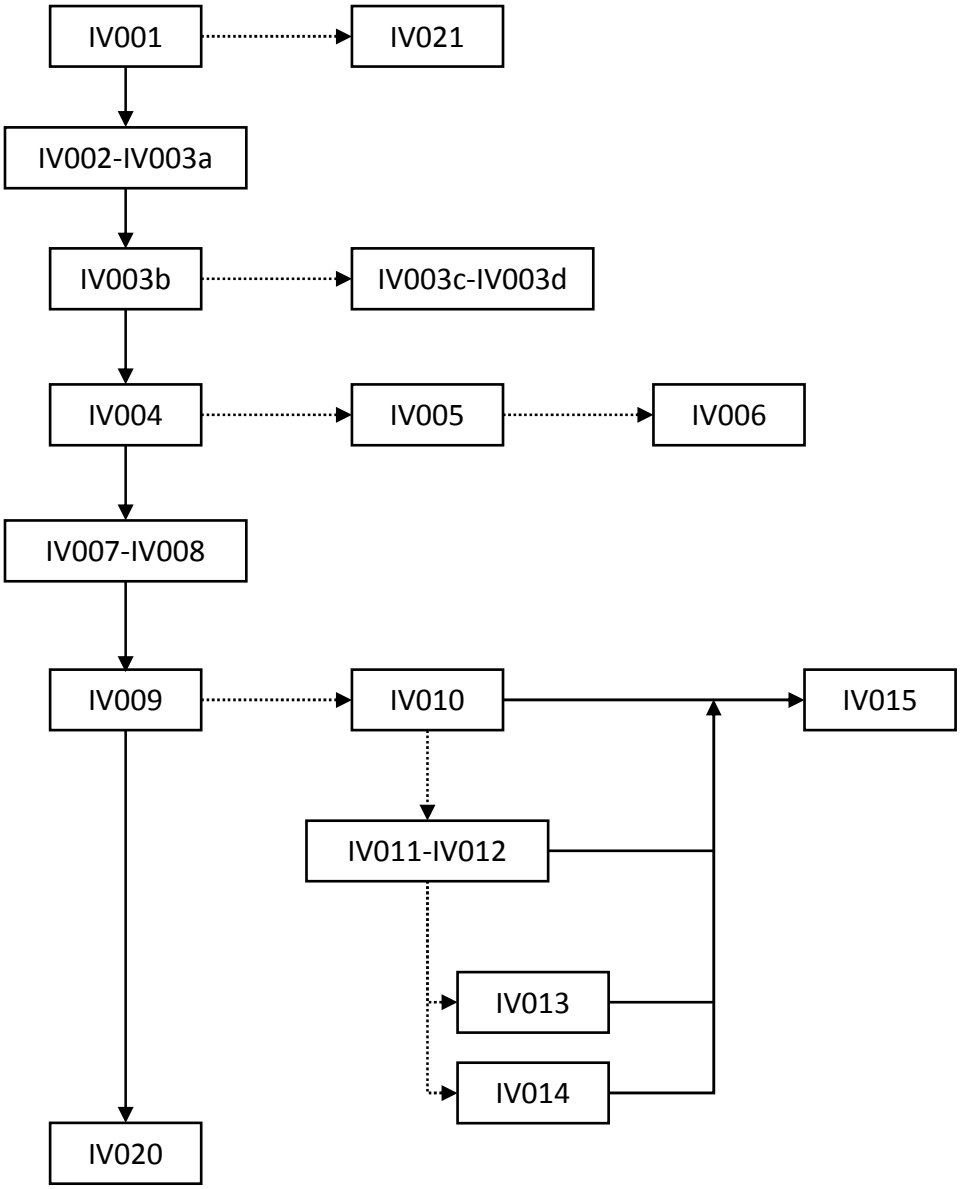
GL-Module: General Life and Persecution History



GS-Module: Grip Strength Measure



IV-Module: Interviewer Observations



ST-Module: Starting Module

ST001a CHECK IF PROXY
Interviewer: Please check. Who answers the questionnaire?

1. Respondent only
2. Respondent and proxy
3. Proxy only

ST001b VALIDATE PROXY
Interviewer: Are you sure that the respondent is not capable of answering the questionnaire?

1. Yes
5. No

ST002 START OF INTERVIEW
Welcome to the life history interview. I am going to ask you some questions about things that have happened during your life. Before we start, I'd like to check a few details you gave us last time we interviewed you.
Interviewer: Press 1 and ENTER to continue.

1. Continue

ST011 GENDER OF RESPONDENT
Interviewer: Code Respondents' Sex (Ask If Unsure).

1. Male
2. Female

ST003 NAME OF RESPONDENT
What is your name?

_____

ST004 CHECK IF NAME IS CORRECTLY RECORDED
We have your name recorded as {name of respondent}. Is this correct?

1. Yes
5. No

ST005 NAME OF RESPONDENT
What is your name?

_____

ST006 MONTH OF BIRTH OF RESPONDENT
In which month were you born?

1. January
2. February
3. March
4. April
5. May
6. June
7. July
8. August
9. September
10. October
11. November
12. December

ST007 YEAR OF BIRTH OF RESPONDENT
In which year were you born?

_____ (1900..2009)

ST008 CHECK IF DATE OF BIRTH IS CORRECTLY RECORDED
We have recorded that you were born in {month of birth} of {year of birth}. Is this correct?

1. Yes
5. No

ST009 MONTH OF BIRTH OF RESPONDENT
In which month were you born?

1. January
2. February
3. March
4. April
5. May
6. June
7. July
8. August
9. September
10. October
11. November
12. December

ST010 YEAR OF BIRTH OF RESPONDENT
In which year were you born?

_____ (1900..2009)

ST012 START THE CALENDAR
Interviewer: In the next question, the calendar will start. Press 1 and ENTER to continue.

1. Continue

ST013 INTRODUCTION OF THE CALENDAR
Interviewer: Please explain life grid to respondent, for example: The Life History Calendar on the screen shows all the years of your life, from birth to the present. I will ask you questions about events in your life and some of your answers will appear on the calendar. There is a row for each of the different areas of your life which we will cover. The calendar can search for national and world events that have occurred during your life. This may help you determine better when other events in your life happened. Press 1 and ENTER to continue.

1. Continue

ST016 PROXY CHECK
Interviewer: Please check. Who answered the questions in this section?

1. Respondent only
2. Respondent and proxy

3. Proxy only

RC-Module: Children History

RC001 START OF RETROSPECTIVE CHILDREN SECTION
First of all, I would like to ask about any children you may have had. Remembering their dates of birth may help you to remember other events.
Interviewer: Press 1 and ENTER to continue.

1. Continue

RC022 EVER HAD OTHER NON_MENTIONED CHILDREN
Have you [had another/ever had a] biological child - even one who only lived for a short time?

1. Yes
5. No

RC023 NUMBER OF OTHER CHILDREN
How many (more) biological children have you had, including any who have died since birth?
Interviewer: Add if necessary: Please include children who have died or are living elsewhere.

_____ (0..20)

RC024 YEAR OF BIRTH OTHER CHILD
(Let us begin with the oldest child.) In which year was [this/your i^{th}] child born?

_____ (1900..2009)

RC025 FIRST NAME OTHER CHILD
Please tell me this child's first name.

_____

RC026 GENDER OTHER CHILD
Interviewer: Please ask or code: Is {name child i} male or female?

1. Male
2. Female

RC027 OTHER CHILD STILL ALIVE
Is {name child *i*} still alive?

1. Yes
5. No

RC028 YEAR OF DEATH OTHER CHILD
In which year did {name child *i*} die?

_____ (1900..2009)

RC029 LEFT JOB BECAUSE OF CHILD
Did you temporarily or permanently stop working when {name child *i*} was born?

1. Yes, stopped working temporarily
2. Yes, never worked again
5. No, no interruption
9. Not applicable: Was not working at that time

RC030 HOW LONG WAS MATERNITY INTERRUPTION
How long did you stop working for?

1. 1 month or less
2. More than 1 month but less than 3 months
3. More than 3 months but less than 6 months
4. More than 6 months but less than 1 year
5. More than 1 year but less than 3 years
6. 3 years or longer, but worked at some point later

RC030a WHEN STARTED WORKING AGAIN
What year did you start working again?

_____ (1900..2009)

RC031 SOURCES OF INCOME MATERNITY LEAVE
Please look at showcard 2. What sources of income did you have when {name child *i*} was born?
Interviewer: Please read out and code all that apply.

1. Income from employment (including self-employment)
2. Financial support from Spouse or Partner
3. Maternity benefits from state, employer or other institutions
4. Child benefits from state or other institutions
5. Financial support from Family (not Spouse/Partner) and friends
6. Running down assets or bank accounts
97. Other

RC031a OTHER SOURCE OF INCOME MATERNITY LEAVE
Please specify.

_____

RC032 MATERNITY BENEFIT AMOUNT
Can you tell me how much was your first net monthly maternity benefit when you had {name child *i*}?
Interviewer: Enter amount. Enter currency at next question.

_____

RC033 CURRENCY MATERNITY BENEFIT
Interviewer: Please ask or code: Which currency was this in?

_____

RC038 OTHER ADOPTED CHILDREN
Did you [adopt another/ever adopt a] child as your own?

1. Yes
5. No

RC039 NUMBER OF OTHER ADOPTED
How many (more) children have you adopted?

_____ (0..20)

RC040 OTHER ADOPTED CHILD NAME
(Let us begin with the first child you adopted.) What is the name of [this/your *i*th] (adopted) child?

_____

RC041 OTHER CHILD YEAR OF ADOPTION
When did you adopt {name child *i*}?

_____ (1900..2009)

RC042 OTHER ADOPTED CHILD GENDER
Interviewer: Please ask or code: Is {name child i} male or female?

1. Male
2. Female

RC043 OTHER ADOPTED CHILD YEAR OF BIRTH
In which year was {name child *i*} born?

_____ (1900..2009)

RC044 OTHER ADOPTED CHILD STILL ALIVE
Is {name child *i*} still alive?

1. Yes
5. No

RC045 OTHER ADOPTED CHILD YEAR OF DEATH
In which year did {name child *i*}die?

_____ (1900..2009)

RC046 LEFT JOB BECAUSE OF CHILD
Did you temporarily or permanently stop working when {name child *i*} was adopted?

1. Yes, stopped working temporarily
2. Yes, never worked again
5. No, no interruption
9. Not applicable: Was not working at that time

RC047 HOW LONG WAS MATERNITY INTERUPTION
How long did you stop working for?

1. 1 month or less
2. More than 1 month but less than 3 months
3. More than 3 months but less than 6 months
4. More than 6 months but less than 1 yea
5. More than 1 year but less than 3 years
6. 3 years or longer, but worked at some point later

RC047a WHEN STARTED WORKING AGAIN
When did you start working again?

_____ (1900..2009)

RC048 SOURCES OF INCOME MATERNITY LEAVE
Please look at showcard 2. What sources of income did you have when {name child *i*} was adopted?
Interviewer: Please read out and code all that apply.

1. Income from employment (including self-employment)
2. Financial support from Spouse or Partner
3. Maternity benefits from state, employer or other institutions
4. Child benefits from state or other institutions
5. Financial support from Family (not Spouse/Partner) and friends
6. Running down assets or bank accounts
97. Other

RC048a OTHER SOURCE OF INCOME MATERNITY LEAVE
Please specify.

_____

RC049 MATERNITY BENEFIT AMOUNT
Can you tell me how much was your first net monthly maternity benefit when {name child *i*} was adopted?
Interviewer: Enter amount. Enter currency at next question.

_____

RC050 CURRENCY MATERNITY BENEFIT
INTERVIEWER Please ask or code: Which currency was this in?

_____

RC054 CHILDREN BORN NOT ALIVE
Have you ever had a stillborn child?

1. Yes
5. No

RC055 NUMBER OF PREGNANCIES NOT ALIVE CHILDREN
How many such pregnancies did you have in all?

_____ (0..20)

RC056 YEAR PREGNANCY ENDED
(Let us begin with the first of these pregnancies.) In which year did [this/the i^{th}] pregnancy end?

_____ (1900..2009)

RC057 MONTHS PREGNANCY LASTED
How many months did this pregnancy last for?
Interviewer: If less than one month enter 1.

_____ (1..10)

RC058 THANKS FOR ANSWERING QN
Thank you for answering these questions.
Interviewer: Press 1 and ENTER to continue.

1. Continue

RC059 PRESENCE OF PEOPLE DURING CHILDREN SECTION
Interviewer: Was there anyone other than you and the respondent in the room while you were asking the questions (RC054-RC058) about stillborn children?

1. Yes
5. No

RC060 END OF THE CHILDREN SECTION
Interviewer: This is the end of the children section. Press 1 and ENTER to continue.

1. Continue

RC061 PROXY CHECK
Interviewer: Please check. Who answered the questions in this section?

1. Respondent only
2. Respondent and proxy
3. Proxy only

RP-Module: Partner History

RP001 START OF THE PARTNER SECTION
I would now like to talk about any relationships you may have had.
Interviewer: Press 1 and ENTER to continue.

1. Continue

RP002 EVER BEEN MARRIED
Have you ever been married?

1. Yes
5. No

RP002e HOW OFTEN MARRIED
How many times have you been married?

_____

RP004 NAME OF PARTNER
([Thinking of your *i*th marriage,/Thinking of the first of these relationships,]) What was your partner's first name?

_____

RP004c WHEN RELATIONSHIP START
When did your relationship with {name of partner} start?

_____ (1900..2009)

RP008 YEAR MARRIED
In which year did you marry {name of partner}?

_____ (1900..2009)

RP004b YEAR STARTED LIVING WITH MARRIED PARTNER
In what year did you first start living with {name partner}?
Interviewer: Code 9997 if never lived together.

_____ (1900..9997)

RP003 YEAR STARTED LIVING WITH PARTNER
In which year did you first start living with [a partner/another partner]?

_____ (1900..2009)

RP009 STILL LIVING WITH PARTNER
Interviewer: Please ask or code: Are you still living with {name of partner}?

1. Yes
5. No

RP010 REASONS FOR NOT LIVING WITH PARTNER
Interviewer: Please ask or code: Why is this? Code 1 for dissolution of civil partnership.

1. Relationship breakdown (including divorce)
2. Widowed/partner died
3. Partner moved into nursing or care home
97. Other reason

RP011 YEAR OF DEATH PARTNER
In which year did {name of partner} die?

_____ (1900..2009)

RP012 YEAR STOPPED LIVING WITH PARTNER
In which year did you stop living with {name of partner}?

_____ (1900..2009)

RP013 DIVORCED PARTNER
Interviewer: Please ask or code: Did you get divorced from {name of partner}?

1. Yes
5. No

RP014 YEAR OF DIVORCE
In which year were you divorced from {name of partner}?

_____ (1900..2009)

RP015a_ ANY OTHER COHABITATING PARTNERS
Have you ever lived together with someone else as a couple?

1. Yes
5. No

RP002d EVER HAD UNMARRIED PARTNER
([Not considering your marriage,/Not considering your marriages,]) Have you ever lived unmarried together with someone as a couple?

1. Yes
5. No

RP016 NON COHABITATING PARTNERS
(Apart from the relationships we already talked about,) Have you ever been in a long term relationship that was important to you, where your partner lived at a different address from you for most of the time?

1. Yes
5. No

RP017 START NON-COHABITATING PARTNERSHIP
In which year did this relationship start?

_____ (1900..2009)

RP018 NAME OF NON-COHABITATING PARTNER
What was your partner's name?

_____

RP019 STILL IN A RELATIONSHIP WITH NON-COHABITATING PARTNER
Are you still in a relationship with {name of non-cohabitating partner}?

1. Yes
5. No

RP020 END NON-COHABITATING PARTNERSHIP
In which year did your relationship end?

_____ (1900..2009)

RP021 ANY OTHER NON COHABITATING PARTNERS
Have you ever been in another long term relationship that was important to you where your partner lived at a different address than you for most of the time?

1. Yes
5. No

RP022 END OF THE PARTNER SECTION
Interviewer: This is the end of the partners section. Press 1 and ENTER to continue.

1. Continue

RP023 PROXY CHECK
Interviewer: Please check. Who answered the questions in this section?

1. Respondent only
2. Respondent and proxy
3. Proxy only

AC-Module: Accommodation History

AC001 START OF THE ACCOMODATION SECTION
In this next section of the interview, I am going to ask you for some information about the different places you have lived in during your life.
Interviewer: Press 1 and ENTER to continue.

1. Continue

AC002 SPECIAL EVENTS IN ACCOMODATION
Please look at showcard 3. Have you ever experienced any of the events on this card?
INTERVIEWER Please code all that apply.

---

1. Lived in a children's home
2. Been fostered with another family
3. Evacuated or relocated during a war
4. Lived in a prisoner of war camp
5. Lived in prison
6. Lived in a labor camp
7. Lived in a concentration camp
8. Been an inpatient in a TB institution
9. Stayed in a psychiatric hospital
10. Been homeless for 1 month or more
96. None of these

AC003 WHEN ESTABLISHED HOME
In which year did you start to live on your own or establish your own household?
Interviewer: If asked, the year the respondent views as his/her first own household after the parental home. Please code 9997 if respondent never established own household.

_____ (1900..9997)

AC004 RESIDENCE WHEN BORN
I'd like to ask you about the residence you lived in when you were born. Did you live there for more than six months?
Interviewer: "Residence" refers to an apartment or single house the respondent lived in.

1. Yes
5. No

AC005 SHORT TERM LIVING
Did you move straight into your next residence and stay there for 6 months or more?
Interviewer: Straight into = after less than 6 months

1. Yes
5. No

AC006 START LIVING AT RESIDENCE
When did you start living in the [first/next] residence that you lived in for six months or more?

_____ (1900..2009)

AC026 WHERE LIVED
How should we refer to this place?
Interviewer: This question is just meant to uniquely identify the place in the personal events listing. It can be the name of the street, a (unique) name of the town or description of the building, e.g. our London flat.

_____

AC007 ESTIMATED START YEAR OF ACCOMMODATION
Interviewer: Ask the respondent to estimate the year they started living in this (next) residence. If cannot estimate, ask for the decade and enter the mid year of this decade - i.e. If 1940s enter 1945

_____ (1900..2009)

AC008 TYPE OF RESIDENCE
Was this a private residence?
Interviewer: Private residences are those the respondent or his parents or guardians owned or rented in any way.

1. Yes
5. No

AC009 TYPE OF PRIVATE RESIDENCE
Did [your parents or guardians/you] live there as [owners, members of a cooperative, tenants/owner, member of a cooperative, tenant], or did [they/you] live rent free?
Interviewer: Rent-free includes: Living with relatives, friends, in company housing or in employer-provided or family/friend provided housing. A sub-tenant (somebody who rents from somebody who himself or herself rents from a third party) is to be classified as tenant.

1. Owner
2. Members of a cooperative
3. Tenant
4. Rent-free
97. Other

AC010 SPECIFY OTHER: PRIVATE RESIDENCE
Please specify 'other' answer.

_____

AC011 TYPE OF NON-PRIVATE RESIDENCE
Please look at showcard 4. What type of residence was it?

1. Boarding school or university accommodation
2. Orphanage or Children's home
3. Housing with the armed forces
4. Mental hospital
5. Other hospital
6. Nursing home for the elderly
7. Prison
8. Prisoner of war camp
9. Labor Camp
10. Concentration camp
97. Other

AC012 SPECIFY OTHER: NONE-PRIVATE RESIDENCE
Please specify 'other' answer.

_____

AC013 WAS RESIDENCE IN CURRENT COUNTRY
Was this residence within the current boundaries of {country}?

1. Yes
5. No

AC014 COUNTRY OF RESIDENCE (NOT CURRENT)
Please look at showcard 5. Which country, considering current boundaries, was this residence in?

Country specific codes used here

AC015 REGION OF RESIDENCE (NOT CURRENT)
Please look at showcard 6. Which region was this residence in?

Country specific codes used here

AC017 AREA OF RESIDENCE
How would you describe the area where this residence was located?
Interviewer: Please read out.

1. A big city
2. The suburbs or outskirts of a big city
3. A large town
4. A small town
5. A rural area or village

AC018 HOW AQUIRED PROPERTY
Please look at showcard 7. How did you acquire this property?
Interviewer: Please code all that apply. If unclear, "own means" includes spousal support.

1. Purchased or built it with own means
2. Purchased or built it with a mortgage
3. Purchased or built it with help from family
4. Received it as a bequest
5. Received it as a gift
6. Acquired it through other means

AC019 PRICE OF OWNED PROPERTY
What was the price of this property?
Interviewer: We are interested in the market value of the property at the time of purchase. Enter amount. Enter currency at next question.

_____

AC020 CURRENCY OF OWNED PROPERTY
Which currency was this in?
Interviewer: Please ask or code.

_____

AC021 STOPPED LIVING AT RESIDENCE
In which year did you stop living in this residence ({name of residence}, which you [lived in when you were born/started living at in {date started living in residence}]
Interviewer: Please code 9997 if respondent still lives in the same residence (i.e. apartment or house).

_____ (1900..9997)

AC022 WHAT DONE WITH PROPERTY
What did you do with the property after you stopped living there?
Interviewer: Please read out.

1. Sold it
2. Kept it
3. Gave it as a gift to someone
4. Was dispossessed
96. None of these

AC023 SALE PRICE OF OWNED PROPERTY
How much did you sell the property for?
Interviewer: We are interested in the market value of the property at the time of the sale.

_____

AC024 SALE CURRENCY OF OWNED PROPERTY
Interviewer: Please ask or code: Which currency was this in?

_____

AC022a STILL OWN PROPERTY
Do you still own this property?

1. Yes
5. No

AC022b DO WITH PROPERTY
What did you do with the property?
Interviewer: Please read out.

1. Sold it
2. Kept it
3. Gave it as a gift to someone
4. Was dispossessed
96. None of these

AC022c WHEN SELL PROPERTY
In which year did you sell the property?

_____ (1900..2009)

AC025 END OF THE ACCOMMODATION SECTION
Interviewer: This is the end of the accommodation section. Press 1 and ENTER to continue.

1. Continue

AC027 PROXY CHECK
Interviewer: Please check. Who answered the questions in this section?

1. Respondent only
2. Respondent and proxy
3. Proxy only

CS-Module: Childhood History

CS001 START OF THE CHILDHOOD SES SECTION
We would like to find out more about where you lived when you were ten years old. Earlier you told me that when you were ten you lived [with your parents or guardians in a private residence/in a boarding school or university accommodation/in an orphanage or children's home/in housing with the armed forces/in a mental hospital/in a hospital/in a nursing home for the elderly/in a prison/in a prisoner of war camp/in a labor camp/in a concentration camp/{name of living location at age 10}].
Interviewer: Press 1 and ENTER to continue.

1. Continue

CS002 ROOMS WHEN TEN YEARS OLD
How many rooms did your household occupy in this accommodation, including bedrooms but excluding kitchen, bathrooms, and hallways?
Interviewer: Do not count boxroom, cellar, attic etc.

_____ (0..50)

CS003 NUMBER OF PEOPLE LIVING IN HOUSEHOLD WHEN TEN
Including yourself, how many people lived in your household at this accommodation when you were 10?

_____ (0..50)

CS004 WHO LIVED IN HOUSEHOLD WHEN TEN
Please look at showcard 8. Which of the people on this card did you live with at this accommodation when you were 10?

1. Biological mother
2. Biological father
3. Adoptive, step or foster mother
4. Adoptive, step or foster father
5. Biological brother(s) or sister(s)
6. Adoptive, step, foster or half brother(s) or sister(s)
7. Grandparent(s)
8. Other relative(s) - specify at later question
9. Other non-relative(s) - specify at later question

CS005 SPECIFY OTHER RELATIVES WHEN TEN
Please specify the other relative(s).

_____

CS006 SPECIFY OTHER NON-RELATIVES WHEN TEN
Please specify the other non-relative(s).

_____

CS007 FEATURES OF ACCOMODATION WHEN TEN
Please look at showcard 9. Did this accommodation have any of the features on this card when you were aged 10?
Interviewer: Please code all that apply.

1. Fixed bath
2. Cold running water supply
3. Hot running water supply
4. Inside toilet
5. Central heating
96. None of these

CS008 NUMBER OF BOOKS WHEN TEN
Please look at showcard 10. Approximately how many books were there in the place you lived in when you were 10? Do not count magazines, newspapers, or your school books.

1. None or very few (0-10 books)
2. Enough to fill one shelf (11-25 books)
3. Enough to fill one bookcase (26-100 books)
4. Enough to fill two bookcases (101-200 books)
5. Enough to fill two or more bookcases (more than 200 books)

CS009 OCCUPATION OF MAIN BREADWINNER WHEN TEN
Please look at showcard 11. What best describes the occupation of the household's main breadwinner when you were 10?
Interviewer: The main breadwinner is the person providing the majority of income for the household.

1. Legislator, senior official or manager
2. Professional
3. Technician or associate professional
4. Clerk
5. Service, shop or market sales worker
6. Skilled agricultural or fishery worker
7. Craft or related trades worker
8. Plant/machine operator or assembler
9. Elementary occupation
10. Armed forces
11. SPONTANEOUS ONLY: There was no main breadwinner

CS010 RELATIVE POSITION TO OTHERS MATHEMATICALLY WHEN TEN
Now I would like you to think back to your time in school when you were 10 years old. How did you perform in Maths compared to other children in your class? Did you perform much better, better, about the same, worse or much worse than the average?

1. Much better
2. Better
3. About the same
4. Worse
5. Much worse
9. Not applicable: did not go to school

CS010a RELATIVE POSITION TO OTHERS LANGUAGE WHEN TEN
And how did you perform in {country's language} compared to other children in your class? Did you perform much better, better, about the same, worse or much worse than the average?

1. Much better
2. Better
3. About the same
4. Worse
5. Much worse

CS011 END OF THE CHILDHOOD SES
Interviewer: This is the end of the childhood section. Press 1 and ENTER to continue.

1. Continue

CS012 PROXY CHECK
INTERVIEWER Please check. Who answered the questions in this section?

1. Respondent only
2. Respondent and proxy
3. Proxy only

RE-Module: Employment History

RE001 START OF THE WORK HISTORY SECTION
Now I'm going to ask you for some details about the work you have done in your life.
Interviewer: Press 1 and ENTER to continue.

1. Continue

RE002 AGE FINISHED FULLTIME EDUCATION
In which year did you finish continuous full-time education at school or college?
Interviewer: Please enter 9000 if respondent never went to school. "Full-time education" is education as the main activity of the respondent. University or college is included in full time education, military service is excluded. Apprenticeship and vocational training are part of full time education.
Examples: a university student working at night as a waitress is in full time education, a plumber doing evening classes is not.

_____ (1900..9997)

RE003 SITUATION AT AGE 15 IF NO EDUCATION
Please look at showcard 12. Which of these best describes the situation you were in at age 15?
Interviewer: Please code only one.

1. Employee or self-employed
2. Unemployed and searching for a job
3. Unemployed but not searching for a job
4. Short term job (less than 6 months)
5. Sick or disabled
6. Looking after home or family
7. Leisure, travelling or doing nothing
8. Retired from work
9. Training
10. Further full time education
11. Military services, war prisoner or equivalent
12. Managing your assets
13. Voluntary or community work
14. Forced labour or in jail
15. Exiled or banished
16. Labor camp
17. Concentration camp
97. Other

RE004 INTRODUCTION TO WORK HISTORY
I'm going to ask you about each paid job that lasted for 6 months or more. A series of short-term jobs for different employers that were essentially the same role counts as 1 job.
Interviewer: Press 1 and ENTER to continue.

1. Continue

RE005 EVER DONE PAID WORK
Have you ever done any paid work, which lasted for a period of 6 months or more?

1. Yes
5. No

RE006 START FIRST PAID JOB
Did you start your first paid job (which lasted for a period of 6 months or more, as employed or self employed) straight after you left full-time education or was there a gap longer than 6 months?
Interviewer: Add if necessary: "As before, if your first job was one of a series of similar short-term jobs for different employers then please count these as 1 job and tell me when you started the first of these similar short-term jobs." Straight after = after less than 6 months

1 job and tell me when you started the first of these similar short-term jobsStraight after=after less than 6 months
1. Started first job STRAIGHT AFTER left full time education
2. Had a gap of 6 MONTHS OR MORE before starting first job
3. Started first job BEFORE left full time education

RE007 SITUATION IN GAP AFTER EDUCATION
Please look at showcard 13. Which of these best describes the situation you were in straight after you left continuous full-time education?
Interviewer: Please code only one.

1. Employee or self-employed
2. Unemployed and searching for a job
3. Unemployed but not searching for a job
4. Short term job (less than 6 months)
5. Sick or disabled
6. Looking after home or family
7. Leisure, travelling or doing nothing
8. Retired from work
9. Training
10. Further full time education
11. Military services, war prisoner or equivalent
12. Managing your assets
13. Voluntary or community work
14. Forced labour or in jail
15. Exiled or banished
16. Labor camp
17. Concentration camp
97. Other

RE008 DID SITUATION EVER CHANGE
Has your situation ever changed since [you were unemployed and searching for a job/you were unemployed and not searching for a job/you had a short term job/you were sick or disabled/you were looking after home or family/you were leisuring, travelling or doing nothing/you retired from work/you were training/you had further full time education/you had military services, were a war prisoner or equivalent/you were managing your assets/your voluntary or community work/you did forced labour or were in jail/you were exiled or banished/you were in a labour camp/you were in a concentration camp/this other situation] in {*FL_Year}*?

1. Yes
5. No

RE009 YEAR OF CHANGE OF SITUATION
In which year did your situation change?

_____ (1900..2009)

RE010 SITUATION CHANGED TO
Please look at showcard 14. Which of these best describes the situation you changed to?
Interviewer: Please code only one.

1. Employee or self-employed
2. Unemployed and searching for a job
3. Unemployed but not searching for a job
4. Short term job (less than 6 months)
5. Sick or disabled
6. Looking after home or family
7. Leisure, travelling or doing nothing
8. Retired from work
9. Training
10. Further full time education
11. Military services, war prisoner or equivalent
12. Managing your assets
13. Voluntary or community work
14. Forced labour or in jail
15. Exiled or banished
16. Labor camp
17. Concentration camp
97. Other

RE011 YEAR STARTED JOB
In which year did you start your [first/next] paid job (as employee or self employed), which lasted for 6 months or more?
Interviewer: Add if necessary: As before, if your job was one of a series of similar short-term jobs for different employers then please count these as 1 job and tell me when you started the first of these similar short-term jobs.

_____ (1900..2009)

RE012 TITLE OF JOB
What was your job called? Please give the exact name or title.

_____

RE013 JOB DESCRIPTION
Please look at showcard 15. What best describes your job as {job title}?
Interviewer: Please code only one.

1. Legislator, senior official or manager
2. Professional
3. Technician or associate professional
4. Clerk
5. Service, shop or market sales worker
6. Skilled agricultural or fishery worker
7. Craft or related trades worker
8. Plant/machine operator or assembler
9. Elementary occupation
10. Armed forces

RE014 JOB INDUSTRY
Please look at showcard 16. What kind of business, industry or services were you working in as {job title}?
Interviewer: Please code only one.

1. Agriculture, hunting, forestry, fishing
2. Mining and quarrying
3. Manufacturing
4. Electricity, gas and water supply
5. Construction
6. Wholesale and retail trade
7. Hotels and restaurants
8. Transport, storage and communication
9. Financial intermediation
10. Real estate, renting and business activities
11. Public administration and defence
12. Education
13. Health and social work
14. Other community

RE015 WAS EMPLOYEE CIVIL SERVANT OR SELF
In this job as {job title}, were you an employee, a civil servant, or a self-employed?

1. Employee
2. Civil servant
3. Self-employed (including working for family business)

RE016 JOB WAS PART OR FULL TIME
In this job as {job title}, did you work full-time or part-time or a combination of both?
Interviewer: If unsure, enter part-time if were classified as such by their employer. Please code only one.

1. Always full-time
2. Always part-time
3. Changed once from full-time to part-time
4. Changed once from part-time to full-time
5. Changed multiple times

RE017 WHY WORKED PART-TIME
Please look at showcard 17. What was the main reason you worked part-time ([in the beginning/when you switched for the first time])?
Interviewer: Please code only one.

1. To take care of own children or grandchildren
2. To take care of parents
3. To take care of other relatives
4. Because of health problems
5. Education/training
6. A full-time job was not available (anymore)
7. Went into partial retirement
97. Other

RE018 WHEN CHANGED TO PART-TIME
In which year did you switch from working full-time to part-time (for the first time) in this job as {job title}?

_____ (1900..2009)

RE019 REASONS CHANGING TO PART-TIME
Please look at showcard 17. What was the main reason when you switched from full-time to part-time (for the first time)?
Interviewer: Please code only one.

1. To take care of own children or grandchildren
2. To take care of parents
3. To take care of other relatives
4. Because of health problems
5. Education/training
6. A full-time job was not available (anymore)
7. Went into partial retirement

97. Other

RE020 WHEN CHANGED TO FULL-TIME
In which year did you switch (for the first time) from working part-time to full-time in this job as {job title}?

_____ (1900..2009)

RE021 FIRST MONTHLY WAGE IN JOB
Can you tell me, approximately, how much you were paid monthly after taxes when you started doing this job as {job title}? (If you worked part-time, please tell me the actual amount that you were paid, not the full-time equivalent.)
Interviewer: Enter amount. Enter currency at next question

_____

RE022 CURRENCY OF WAGE
Which currency was this in?
Interviewer: Please ask or code.

_____

RE023 FIRST MONTHLY WORK INCOME IN SELF-EMPLOYMENT
Can you tell me, approximately, how much was your monthly income from work after taxes when you started doing this job as {job title}? (If you worked part-time, please tell me the actual amount that you were paid, not the full-time equivalent.)
Interviewer: Enter amount. Enter currency at next question

_____

RE024 CURRENCY OF WORK INCOME
Which currency was this in?
Interviewer: Please ask or code.

_____

RE025 CONTRIBUTIONS TO RETIREMENT PLANS
While doing this job as {job title}, towards which of the following did you or your employer contribute?
Interviewer: Please read out and code all that apply. Add if necessary: These contributions may have happened at any time you were in this job.

1. A public pension plan
2. An occupational pension plan
3. A private pension plan or individual retirement plan
4. No contributions paid

RE026 YEAR STOPPED IN THIS JOB
In which year did you stop doing this job as {job title}?
Interviewer: If still in this job, please code 9997. Do not include maternity leaves. Add if necessary: As before, if your first job was one of a series of similar short-term jobs for different employers then please count these as 1 job and tell me when you stopped the last of these similar short-term jobs. In general you should code when the respondent changed employer although you can count a change in roles for the same employer if the respondent wishes.

_____ (1900..9997)

RE027 CURRENT WAGE IF STILL EMPLOYED
Can you tell me, approximately, how much is your current monthly wage after taxes as {job title}? (If you work part-time, please tell me the actual amount that you are paid, not the full-time equivalent.)
Interviewer: Enter amount. Enter currency at next question.

_____

RE028 CURRENCY OF CURRENT WAGE
Which currency was this in?
Interviewer: Please ask or code.

_____

RE029 CURRENT WORK INCOME IF STILL SELF-EMPLOYED
Can you tell me, approximately, how much is your current monthly income from work after taxes as {job title}? (If you work part-time, please tell me the actual amount that you are paid, not the full-time equivalent.)
Interviewer: Enter amount. Enter currency at next question.

RE030 CURRENCY OF CURRENT WORK INCOME
Which currency is this in?
Interviewer: Please ask or code.

_____

WQ015 INTRODUCTION TO WORK QUALITY CURRENT
Please look at showcard 19. I am going to read some statements people might use to describe their work. Thinking about your present job as {job title}, please tell me whether you strongly agree, agree, disagree or strongly disagree with the each statement.
Interviewer: Press 1 and ENTER to continue.

1. Continue

WQ016 WORK IS PHYSICALLY DEMANDING
My job as {job title} is physically demanding. Would you say you ...

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

WQ017 WORK IS UNCOMFORTABLE
My immediate work environment is uncomfortable (for example, because of noise, heat, crowding). (Would you say you ...)

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

WQ018 WORK HAS HEAVY TIME PRESSURE
I am under constant time pressure due to a heavy workload. (Would you say you ...)

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

WQ019 WORK IS EMOTIONALLY DEMANDING
My work is emotionally demanding. (Would you say you ...)

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

WQ020 WORK INVOLVES CONFLICTS
I am exposed to recurring conflicts and disturbances. (Would you say you ...)
Interviewer: This refers to clients, co-workers or supervisors.

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

WQ021 WORK HAS LITTLE FREEDOM TO DECIDE
I have very little freedom to decide how to do my work. (Would you say you ...)

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

WQ022 WORK ALLOWS DEVELOPMENT OF SKILLS
I have an opportunity to develop new skills. Would you say you ...)

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

WQ023 WORK GIVES RECOGNITION
I receive the recognition I deserve for my work. (Would you say you ...)

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

WQ024 WORK HAS ADEQUATE SALARY
Considering all my efforts and achievements, my salary is adequate. (Would you say you ...)

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

WQ025 WORK HAS ADEQUATE SUPPORT
I receive adequate support in difficult situations. (Would you say you ...)

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

WQ026 CURRENT WORK ATMOSPHERE
There is a good atmosphere between me and my colleagues. (Would you say you ...)

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

WQ027 WORK EMPLOYEES ARE TREATED FAIRLY
In general, employees are treated with fairness. (Would you say you ...)

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

WQ028 CURRENT WORK HEALTH RISK REDUCED
The state takes adequate measures to protect me from health hazards at the workplace. (Would you say you ...)

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

RE031 REASONS LEFT JOB
Please look at showcard 18. On what terms did you leave this job?
Interviewer: Please code only one.

1. I resigned
2. I was laid off
3. By mutual agreement
4. My plant or office closed down
5. A temporary job had been completed
6. I retired
97. Other reason

RE032 GAP AFTER LEAVING THIS JOB
Did you start your next job straight after leaving this job as [{job title}] or was there more than a 6-month gap?

1. Started next job STRAIGHT AFTER this job
2. Had a gap of 6 MONTHS OR MORE before starting next job
3. Started next job BEFORE this job ended
4. This was respondent's LAST PAID JOB as employee or self employed

---

RE033 DONE IN GAP AFTER LEAVING THIS JOB
Please look at showcard 20. Which of these best describes the situation you were in during the time before you started your next job?
Interviewer: Please code only one.

1. Employee or self-employed
2. Unemployed and searching for a job
3. Unemployed but not searching for a job
4. Short term job (less than 6 months)
5. Sick or disabled
6. Looking after home or family
7. Leisure, travelling or doing nothing
8. Retired from work
9. Training
10. Further full time education
11. Military services, war prisoner or equivalent
12. Managing your assets
13. Voluntary or community work
14. Forced labour or in jail
15. Exiled or banished
16. Labor camp
17. Concentration camp
97. Other

RE034 INCOME DURING GAP AFTER LEAVING THIS JOB
Please look at showcard 21. What sources of income did you have?
Interviewer: Please code all that apply.

1. Financial support from Spouse or Partner
2. Financial support from Family (not Spouse/Partner) and friends
3. Private or Public Disability Insurance
4. Benefits or grants from state or other institutions
5. Sold property
6. Running down financial asset or bank account
97. Other

RE034a OTHER INCOME DURING GAP AFTER LEAVING THIS JOB
Please specify.

_____

RE035 SITUATION IN AFTER LAST JOB

Please look at showcard 22. Which of these best describes your situation [after you left your last job in *FL_year*/in *FL_year*, after you were unemployed and searching for a job/in *FL_year*, after you were unemployed and not searching for a job/in *FL_year*, after you had a short term job/in *FL_year*, after you were sick or disabled/in *FL_year*, after you were looking after home or family/in *FL_year*, after you were leisuring, travelling or doing nothing/in *FL_year*, after you retired from work/in *FL_year*, after you were training/in *FL_year*, after you had further full time education/in *FL_year*, after you had military services, were a war prisoner or equivalent (excluding professional army employment)/in *FL_year*, after you were managing your assets/in *FL_year*, after your voluntary or community work/in *FL_year*, after you did forced labour or were in jail/in *FL_year*, after you were exiled or banished/in *FL_year*, after you were in a labor camp/in *FL_year*, after you were in a concentration camp/in *FL_year*, after this other situation]?
Interviewer: Please code only one.

1. Employee or self-employed
2. Unemployed and searching for a job
3. Unemployed but not searching for a job
4. Short term job (less than 6 months)
5. Sick or disabled
6. Looking after home or family
7. Leisure, travelling or doing nothing
8. Retired from work
9. Training
10. Further full time education
11. Military services, war prisoner or equivalent
12. Managing your assets
13. Voluntary or community work
14. Forced labour or in jail
15. Exiled or banished
16. Labor camp
17. Concentration camp

97. Other

RE035a RECEIVE RETIREMENT BENEFITS

Did you receive any retirement benefits since you retired?

1. Yes
5. No

RE036 PENSION BENEFIT WHEN RETIRED
Approximately, how much was your first total monthly benefit after taxes from social security or pensions?
Interviewer: Enter sum of all pensions (public, occupational or private). Enter currency at next question.

_____

RE037 CURRENCY OF PENSION BENEFIT
Which currency is this in?
Interviewer: Please ask or code.

_____

RE038 PAID JOB AFTER RETIREMENT
After this job as {last job title}, did you do any kind of paid job even if retired?

1. Yes
5. No

RE039 HAS SITUATION CHANGED AFTER LAST JOB
Please look at showcard 22. Has your situation ever changed to any of the situations described in this card [since you were unemployed and searching for a job in *FL_year*/since you were unemployed and not searching for a job in *FL_year*/since you had a short term job in *FL_year*/since you were sick or disabled in *FL_year*/since you were looking after home or family in FL_year/since you were leisuring, travelling or doing nothing in *FL_year*/since you retired from work in *FL_year*/since you were training in *FL_year*/since you had further full time education in *FL_year*/since you had military services, were a war prisoner or equivalent (excluding professional army employment) in *FL_year*/since you were managing your assets in *FL_year*/since your voluntary or community work in *FL_year*/since you did forced labour or were in jail in *FL_year*/since you were exiled or banished in *FL_year*/since you were in a labor camp in *FL_year*/since you were in a concentration camp in *FL_year*/since this other situation in *FL_year*]?

1. Yes
5. No

RE039a YEAR CHANGING SITUATION AFTER LAST JOB
In which year did your situation change?

_____ (1900..2009)

RE040 WHICH WAS MAIN JOB IN CAREER
Which of the jobs you have told me about was the final job of your main career or occupation?
INTERVIEWER: If necessary: 'By this we mean the last job in the career or the occupation that took up most of your working life, even though you might have had other jobs afterwards'. Please code only one.

_____

RE041 WAGE AT END OF MAIN JOB
Can you tell me, approximately, how much you were paid monthly after taxes at the end of your job as {job title}? (If you worked part-time, please tell me the actual amount that you were paid, not the full-time equivalent.)
Interviewer: Enter amount. Enter currency at next question.

_____

RE042 CURRENCY OF MAIN JOB WAGE
Which currency is this in?
Interviewer: Please ask or code.

_____

RE043 WORK INCOME AT END OF MAIN JOB
Can you tell me, approximately, how much was your monthly income from work after taxes at the end of your job as {last job title}? (If you worked part-time, please tell me the actual amount that you were paid, not the full-time equivalent.)
Interviewer: Enter amount. Enter currency at next question.

_____

RE044 CURRENCY OF MAIN WORK INCOME
Which currency is this in?
Interviewer: Please ask or code.

_____

WQ001 INTRODUCTION TO WORK QUALITY
Please look at showcard 19. I am going to read some statements people might use to describe their work. Thinking about your job as {main job tilte}, please tell me whether you strongly agree, agree, disagree or strongly disagree with each statement.
Interviewer: Press 1 and ENTER to continue.

1. Continue

WQ002 WORK WAS PHYSICALLY DEMANDING
My job as {main job tilte} was physically demanding. Would you say you...

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

WQ003 WORK WAS UNCOMFORTABLE
My immediate work environment was uncomfortable (for example, because of noise, heat, crowding). (Would you say you ...)

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

WQ004 WORK HAD HEAVY TIME PRESSURE
I was under constant time pressure due to a heavy workload. (Would you say you ...)

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

WQ005 WORK WAS EMOTIONALLY DEMANDING
My work was emotionally demanding. (Would you say you ...)

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

WQ006 WORK INVOLVED CONFLICTS
I was exposed to recurrent conflicts and disturbances. (Would you say you ...)
Interviewer: This refers to clients, co-workers or supervisors.

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

WQ007 WORK HAD LITTLE FREEDOM TO DECIDE
I had very little freedom to decide how to do my work. (Would you say you ...)

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

WQ008 WORK ALLOWED DEVELOPMENT OF SKILLS
I had an opportunity to develop new skills. (Would you say you ...)

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

WQ009 WORK GAVE RECOGNITION
I received the recognition I deserved for my work. (Would you say you ...)

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

WQ010 WORK HAD ADEQUATE SALARY
Considering all my efforts and achievements, my salary was adequate. (Would you say you ...)

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

WQ011 WORK HAD ADEQUATE SUPPORT
I received adequate support in difficult situations. (Would you say you ...)

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

WQ012 WORK ATMOSPHERE
There was a good atmosphere between me and my colleagues. (Would you say you ...)

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

WQ013 WORK EMPLOYEES TREATED FAIR
In general, employees were treated fairly. (Would you say you ...)

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

WQ014 WORK HEALTH RISK REDUCED
The state took adequate measures to protect me from health hazards at the workplace. (Would you say you ...)

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

DQ001 EVER LEFT JOB BECAUSE OF DISABILITY
Did you ever leave a job because of ill health or disability?

1. Yes
5. No

DQ002 LEFT WHICH JOB BECAUSE OF DISABILITY
Which job did you leave (because of ill health or disability)?
Interviewer: Code all that apply.

_____

DQ003 EXTENT OF LIMITATION
How much did ill health or disability limit your ability to work as [{job title}]?
Interviewer: Please read out.

1. Very little
2. Somewhat
3. Very much
4. Could not do job anymore

DQ005 FOUND JOB SUITABLE FOR LIMITATION
After giving up this job, did you take up a job in which ill health or disability limited your ability to work to a lesser extent?

1. Yes
5. No

DQ007 TOOK TEMPORARY LEAVE OF ABSENCE FOR DISABILITY
Did you ever take a temporary leave of absence from a job for 6 months or more because of ill health or disability?

1. Yes
5. No

DQ008 TEMP LEAVE WHICH JOB BECAUSE OF DISABILITY
Which [{empty}/other] job (did you take a temporary leave of absence from for 6 months or more because of ill health or disability)?
Interviewer: Please code only one. Multiple leaves of absence are captured in the loop.

_____

DQ009 WHEN TOOK LEAVE FOR DISABILITY
In which year did you take that leave of absence?

_____ (1900..2009)

DQ010 HOW LONG LASTED LEAVE FOR DISABILITY
How long did you take that leave of absence for?
Interviewer: Please code only one.

1. Between six months and a year
2. Between one and two years
3. More than two years

DQ011 SOURCES OF INCOME IN LEAVE
Please look at showcard 21. What sources of income did you have?
Interviewer: Please code all that apply.

1. Financial support from Spouse or Partner
2. Financial support from Family (not Spouse/Partner) and friends
3. Private or Public Disability Insurance
4. Benefits or grants from state or other institutions
5. Sold property
6. Running down financial asset or bank account
97. Other

DQ011a OTHER SOURCE OF INCOME IN LEAVE
Please specify.

_____

DQ012 OTHER TEMP LEAVES FOR DISABILITY
Were there other times where you took a temporary leave of absence from a job for 6 months or more because of ill health or disability?

1. Yes
5. No

DQ013 EVER LIMITED HOURS BECAUSE OF DISABILITY
Did you ever reduce the hours you worked in a job because of ill health or disability?

1. Yes
5. No

DQ014 LEFT WHICH JOB BECAUSE OF DISABILITY
In which job (did you reduce the hours you worked because of ill health or disability)?
Interviewer: Please code only one. More reductions in hours are captured in the loop.

_____

DQ015 REDUCTION EXTENT OF HOURS
By how many hours per week did you reduce your work?
Interviewer: Please enter number of hours.

_____ (0..80)

DQ016 OTHER JOBS REDUCE HOURS FOR DISABILITY
Were there any other jobs in which you limited the hours you worked because of ill health or disability?

_____

DQ017 EVER APPLIED FOR PUBLIC DISABILITY PENSION
Did you ever apply for Disability Living Allowance (DLA) or Attendance Allowance (AA)?

1. Yes
5. No

DQ018 WHEN APPLY FOR PUBLIC DIS PENSION
In which year did you apply for a Disability Living Allowance (DLA) or Attendance Allowance (AA)?

_____ (1900..2009)

DQ019 WAS PUBLIC DISABILITY PENSION GRANTED
When you applied for a Disability Living Allowance (DLA) or Attendance Allowance (AA) in {year of application}, was your application accepted?

1. Yes
3. Still pending
5. No

DQ020 EVER AGAIN APPLY FOR PUBLIC DIS PENSION
Did you ever again apply for a Disability Living Allowance (DLA) or Attendance Allowance (AA)?

1. Yes
5. No

DQ021a EVER PURCHASED PRIVATE DISABILITY INSURANCE
Did you ever purchase a private disability insurance? This can be an individual policy that you purchased through an insurance company or group policy, for example offered by an employer.

1. Yes
5. No

DQ021 EVER APPLIED FOR PRIVATE DISABILITY INSURANCE
Did you ever apply for benefits from this private disability insurance?

1. Yes
5. No

DQ022 WHEN APPLY FOR PRIVATE DIS INSURANCE
In which year did you apply for these benefits?

_____ (1900..2009)

DQ023 WAS PRIVATE DISABILITY INSURANCE GRANTED
When you applied for these benefits in {year of application}, was your application accepted?

1. Yes
3. Still pending
5. No

DQ024 EVER AGAIN APPLY FOR PRIVATE DIS INSURANCE
Did you ever again apply for a private disability insurance benefits?

1. Yes
5. No

WQ029 INTRODUCTION TO SECOND WORK QUALITY
Please look at showcard 19. Looking back at your job career until now, please tell me whether you strongly agree, agree, disagree or strongly disagree with each statement.
Interviewer: Press 1 and ENTER to continue.

1. Continue

WQ030 SATISFACTION WITH JOB CAREER
All things considered, I am satisfied with my job career. Would you say you ...

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

WQ031 HAD DISAPPOINTING JOB CAREER
I experienced a major disappointment in my job career. (Would you say you ...)

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

WQ032 SATISFIED WITH ACHIEVEMENTS
Considering all my efforts, I am satisfied with my work achievements. (Would you say you...)

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

WQ033 SACRIFICIED TOO MUCH FOR JOB
People close to me said I sacrificed too much for my job. (Would you say you ...)

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

WQ035 HEALTH HAS SUFFERED AT WORK
My health has suffered from my job. (Would you say you ...)

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

RE045 END OF WORK HISTORY SECTION
Interviewer: This is the end of the work history section. Press 1 and ENTER to continue.

1. Continue

RE048 PROXY CHECK

1. Respondent only
2. Respondent and proxy
3. Proxy only

FS-Module: Financial Investment History

FS001 START OF THE FINANCIAL HISTORY SECTION
In the next section of the interview, I am going to ask you some questions about investments that you may have made during your life. I will only ask about types of investments, not about any amounts.
Interviewer: Press 1 and ENTER to continue.

1. Continue

FS002 EVER HAD ANY STOCKS OR SHARES
Have you ever had any money in stocks or shares (listed or unlisted on stock market)?
INTERVIEWER Stocks are pieces of paper that show that the person owns part of a corporation and has the right to receive dividends from it.

1. Yes
5. No

FS003 WHEN INVESTED IN STOCKS FIRST
In which year did you invest money in stocks or shares for the first time?

_____ (1900..2009)

FS004 EVER HAD ANY MUTUAL FUNDS
Have you ever had any money in mutual funds or managed investment accounts?
Interviewer: Mutual funds are a pool of money belonging to many investors who trust a manager to invest it in stocks and/or bonds.

1. Yes
5. No

FS005 WHEN INVESTED IN MUTUAL FUNDS FIRST
In what year did you invest money in mutual funds or managed investment accounts for the first time?

_____ (1900..2009)

FS006 EVER HAD RETIREMENT ACCOUNT
Have you ever subscribed to an individual retirement account?
Interviewer: An individual retirement account is a retirement plan that lets the person put some money away each year, to be (partially) taken out at retirement time.

1. Yes
5. No

FS007 WHEN SUBSCRIBED TO RETIREMENT ACCOUNT FIRST
In which year did you subscribe to the individual retirement account (for the first time)?

_____ (1900..2009)

FS008 EVER TAKEN OUT A LIFE INSURANCE POLICY
Have you ever taken out a life insurance policy?

1. Yes
5. No

FS009 WHEN TAKEN OUT A LIFE INSURANCE POLICY FIRST
In which year did you take out the life insurance policy (for the first time)?

_____ (1900..2009)

FS010 EVER OWNED BUSINESS
Have you ever been the owner or co-owner of a business which you did not work in?

1. Yes
5. No

FS011 WHEN FIRST OWNED BUSINESS
In which year did you first start this business or became its owner or co-owner?

_____ (1900..2009)

HH017 TOTAL HOUSEHOLD NET INCOME IN AVERAGE MONTH
Now we have one single question about your recent household finances: How much was the overall household income after taxes that your household had in an average month of {previous year}?
Interviewer: If unclear, this amount should be coded in {local currency}.

_____

HH018 TOTAL INCOME RECEIVED BY ALL HOUSEHOLD MEMBERS IN LAST MONTH UB
Please look at showcard 23. Can you tell me the letter that corresponds to the overall income, after tax, that your household had in an average month in {previous year}?

_____

FS012 END OF FINANCIAL SITUATION SECTION
Interviewer: This is the end of the financial situation section. Press 1 and ENTER to continue.

1. Continue

FS013 PROXY CHECK
Interviewer: Please check. Who answered the questions in this section?

1. Respondent only
2. Respondent and proxy
3. Proxy only

HS-Module: Health History

HS001 START OF THE HEALTH HISTORY SECTION
I would now like to ask you some questions about your health.
Interviewer: Press 1 and ENTER to continue.

1. Continue

PH003 HEALTH IN GENERAL QUESTION FOR WAVE 3
Would you say your health now is ...
Interviewer: Please read out.

1. Excellent
2. Very good
3. Good
4. Fair
5. Poor

HS002 START OF CHILDHOOD HEALTH SECTION
The next set of questions is about your health during your childhood. By childhood we mean from when you were born up until, and including, when you were age 15.
Interviewer: Press 1 and ENTER to continue.

1. Continue

HS003 CHILDHOOD HEALTH STATUS
Would you say that your health during your childhood was in general excellent, very good, good, fair, or poor?

1. Excellent
2. Very good
3. Good
4. Fair
5. Poor
6. SPONTANEOUS ONLY: Health varied a great deal

HS004 CHILDHOOD HEALTH MISSED SCHOOL FOR 1 MONTH+
Did you ever miss school for a month or more because of a health condition during childhood (that is, from when you were born up to and including age 15)?

1. Yes
5. No

HS005 CHILDHOOD HEALTH: MISSED SCHOOL FOR 1 MONTH+
(During your childhood, because of a health condition,) were you ever confined to bed or home for one month or more?

1. Yes
5. No

HS006 CHILDHOOD HEALTH: IN HOSPITAL FOR 1 MONTH+
(During your childhood, because of a health condition,) were you ever in hospital for one month or more?

1. Yes
5. No

HS007 CHILDHOOD IN HOSPITAL 3 TIMES IN 12 MONTHS
Did you ever stay in hospital more than three times within a 12-month period during your childhood (that is, from when you were born up to and including age 15)?

1. Yes
5. No

HS008 CHILDHOOD ILLNESSES 1
Please look at showcard 24. Did you have any of the diseases on this card during your childhood (that is, from when you were born up to and including age 15)?
Interviewer: Please code all that apply. Choose 'other' in the next question if necessary.

1. Infectious disease (e.g. measles, rubella, chickenpox, mumps, tubercolosis, diphtheria, scarlet fever)
2. Polio
3. Asthma
4. Respiratory problems other than asthma
5. Allergies (other than asthma)
6. Severe diarrhoea
7. Meningitis/encephalitis
8. Chronic ear problems
9. Speech impairment
10. Difficulty seeing even with eyeglasses
96. None of these

HS009 CHILDHOOD ILLNESSES 2
Please look at showcard 25. Did you have any of the illnesses or health conditions on this card during your childhood (that is, from when you were born up to and including age 15)?
Interviewer: Please code all that apply.

1. Severe headaches or migraines
2. Epilepsy, fits or seizures
3. Emotional, nervous, or psychiatric problem
4. Broken bones, fractures
5. Appendicitis
6. Childhood diabetes or high blood sugar
7. Heart trouble
8. Leukaemia or lymphoma
9. Cancer or malignant tumour (excluding minor skin cancers)
96. None of these
97. Other serious health condition (please specify)

HS010 SPECIFY OTHER SERIOUS CHILDHOOD CONDITION
Please specify.

_____

HS011 WHEN INFECTIOUS DISEASE
Please look at showcard 26. When in your childhood did you first have an infectious disease?

1. When I was between 0-5 years old.
2. When I was between 6-10 years old.
3. When I was between 11-15 years old.

HS015 WHEN POLIO
Please look at showcard 26. When in your childhood did you first have polio?

1. When I was between 0-5 years old.
2. When I was between 6-10 years old.
3. When I was between 11-15 years old.

HS018 WHEN ASTHMA
Please look at showcard 26. When in your childhood did you first experience asthma?

1. When I was between 0-5 years old.

2. When I was between 6-10 years old.
3. When I was between 11-15 years old.

HS019 DID ASTHMA LAST FOR A YEAR+
Did the asthma last or reoccur over a period of at least a year?

1. Yes
5. No

HS020 WHEN RESPIRATORY PROBLEMS
Please look at showcard 26. When in your childhood did you first experience respiratory problems other than asthma?

1. When I was between 0-5 years old.
2. When I was between 6-10 years old.
3. When I was between 11-15 years old.

HS021 DID RESPIRATORY PROBLEMS LAST FOR A YEAR+
Did the respiratory problems last or reoccur over a period of at least a year?

1. Yes
5. No

HS022 WHEN ALLERGIES
Please look at showcard 26. When in your childhood did you first experience allergies other than asthma?

1. When I was between 0-5 years old.
2. When I was between 6-10 years old.
3. When I was between 11-15 years old.

HS023 DID ALLERGIES LAST FOR A YEAR+
Did the allergies last or reoccur over a period of at least a year?

1. Yes
5. No

HS024 WHEN SEVERE DIARRHOEA
Please look at showcard 26. When in your childhood did you first experience severe diarrhoea?

1. When I was between 0-5 years old.
2. When I was between 6-10 years old.
3. When I was between 11-15 years old.

HS025 DID SEVERE DIARRHOEA LAST FOR A YEAR+
Did the severe diarrhoea last or reoccur over a period of at least a year?

1. Yes
5. No

HS027 WHEN MENINGITIS
Please look at showcard 26. When in your childhood did you first experience meningitis?

1. When I was between 0-5 years old.
2. When I was between 6-10 years old.
3. When I was between 11-15 years old.

HS028 WHEN EAR PROBLEMS
Please look at showcard 26. When in your childhood did you first experience chronic ear problems?

1. When I was between 0-5 years old.
2. When I was between 6-10 years old.
3. When I was between 11-15 years old.

HS029 DID EAR PROBLEMS LAST FOR A YEAR+
Did the chronic ear problems last or reoccur over a period of at least a year?

1. Yes
5. No

HS042 WHEN SPEECH IMPAIRMENT
Please look at showcard 26. When in your childhood did you first experience speech impairments?

1. When I was between 0-5 years old.
2. When I was between 6-10 years old.
3. When I was between 11-15 years old.

HS043 WHEN DIFFICULTY WITH EYEGLASSES
Please look at showcard 26. When in your childhood did you first have difficulties to see even with eyeglasses?

1. When I was between 0-5 years old.
2. When I was between 6-10 years old.

3. When I was between 11-15 years old.

HS030 WHEN HEADACHES OR MIGRAINES
Please look at showcard 26. When in your childhood did you first experience severe headaches or migraines?

1. When I was between 0-5 years old.
2. When I was between 6-10 years old.
3. When I was between 11-15 years old.

HS031 DID HEADACHES OR MIGRAINES LAST FOR A YEAR+
Did the severe headaches or migraines last or reoccur over a period of at least a year?

1. Yes
5. No

HS032 WHEN EPILEPSY
Please look at showcard 26. When in your childhood did you first experience epilepsy, fits or seizures?

1. When I was between 0-5 years old.
2. When I was between 6-10 years old.
3. When I was between 11-15 years old.

HS033 DID EPILEPSY LAST FOR A YEAR+
Did the epilepsy, fits or seizures last or reoccur over a period of at least a year?

1. Yes
5. No

HS034 WHEN PSYCHIATRIC PROBLEMS
Please look at showcard 26. When in your childhood did you first experience emotional, nervous, or psychiatric problems?

1. When I was between 0-5 years old.
2. When I was between 6-10 years old.
3. When I was between 11-15 years old.

HS035 DID PSYCHIATRIC PROBLEMS LAST FOR A YEAR+
Did these emotional, nervous, or psychiatric problems last or reoccur over a period of at least a year?

1. Yes

5. No

HS036 WHEN BROKEN BONES AND FRACTURES
Please look at showcard 26. When in your childhood did you first have a broken bone or a fracture?

1. When I was between 0-5 years old.
2. When I was between 6-10 years old.
3. When I was between 11-15 years old.

HS037 WHEN APPENDICITIS
Please look at showcard 26. When in your childhood did you experience appendicitis?

1. When I was between 0-5 years old.
2. When I was between 6-10 years old.
3. When I was between 11-15 years old.

HS038 WHEN CHILDHOOD DIABETES
Please look at showcard 26. When in your childhood did you first experience childhood diabetes or high blood sugar?

1. When I was between 0-5 years old.
2. When I was between 6-10 years old.
3. When I was between 11-15 years old.

HS039 WHEN HEART TROUBLE
Please look at showcard 26. When in your childhood did you first experience heart trouble?

1. When I was between 0-5 years old.
2. When I was between 6-10 years old.
3. When I was between 11-15 years old.

HS040 WHEN LEUKAEMIA
Please look at showcard 26. When in your childhood did you first experience leukaemia or lymphoma?

1. When I was between 0-5 years old.
2. When I was between 6-10 years old.
3. When I was between 11-15 years old.

HS041 WHEN CHILDHOOD CANCER
Please look at showcard 26. When in your childhood did you first experience cancer or have a malignant tumour?

1. When I was between 0-5 years old.
2. When I was between 6-10 years old.
3. When I was between 11-15 years old.

HS044 WHEN OTHER SERIOUS CONDITION
Please look at showcard 26. When in your childhood did you first have {other serious health condition}?

1. When I was between 0-5 years old.
2. When I was between 6-10 years old.
3. When I was between 11-15 years old.

HS049 START OF MENSTRUAL PERIOD
Approximately when did you have your first menstrual period?
Interviewer: If cannot give exact year, code don't know and ask age-band at next question.

_____ (1900..2009)

HS050 ESTIMATE START OF MENSTRUAL PERIOD
Were you ...
Interviewer: Please read out.

1. less than 11 years old
2. between 11 and 12 years old
3. between 13 and 15 years old
4. between 16 and 18 years old
5. or, older than 18

HS051 END OF MENSTRUAL PERIOD
In which year did you have your last period or menstrual bleeding?
Interviewer: Enter 9997 if respondent still has menstrual bleedings.

_____ (1900..9997)

HS045 DID PARENTS SMOKE DURING CHILDHOOD
During your childhood, did any of your parents or guardians...
Interviewer: Please read out and code all that apply.

1. Smoke
2. Drink heavily
3. Have mental health problems
96. None of these

HS048 START OF THE HEALTH HISTORY SECTION
The next set of questions is about your health during your adulthood. By adulthood we mean from when you were 16 up until now.
Interviewer: Press 1 and ENTER to continue.

1. Continue

HS052 EVER HAD PHYSICAL INJURY TO DISABILITY
Have you ever received a physical injury that has led to any permanent handicap, disability or limitations in what you can do in daily life?

1. Yes
5. No

HS052a_ TYPE OF INJURY
What type of injury was this?

_____

HS053 WHEN RECEIVED THIS INJURY
When did you receive this injury?
Interviewer: If respondent had more than one injury, please ask when first injury was received.

_____ (1900..2009)

HS054 NUMBER PERIODS OF ILL HEALTH
(Apart from any injuries you've already told us about today,) as an adult, how many periods of ill health or disability have you had that lasted for more than a year?
Interviewer: This includes serious illnesses that lasted less than one year, but influenced the respondent's daily life for more than a year (like cancer or diabetes).Please code only one.

0. None
1. One
2. Two
3. Three
4. More than three
5. Have been ill or with disabilities for all or most of my life

---

HS059 WHEN DID ILLNESS PERIOD START
When did [this period/the first period/the second period/the third period] of ill health or disability start?

_____ (1900..2009)

HS055 TYPE 1 OF ILLNESS FOR PERIODS OF ILL HEALTH
Please look at showcard 27. Which conditions on this card, if any, accounted for [this period of/the first period of/this periods of/this time of/the second period of/the third period of] ill health or disability (that you had as an adult)?
Interviewer: Please code all that apply. Choose 'other' in the next question if necessary.

1. Back pain
2. Arthritis, including osteoarthritis and rheumatism
3. Osteoporosis
4. Angina or heart attack (including myocardial infarction or coronary thrombosis)
5. Other heart disease
6. Diabetes or high blood sugar
7. Stroke
8. Asthma
9. Respiratory problems other than asthma (e.g. bronchitis, chronic obstructive pulmonary disease)
10. Tuberculosis
11. Severe headaches or migraines
96. None of these

HS056 TYPE 2 OF ILLNESS FOR PERIODS OF ILL HEALTH
Please look at showcard 28. Here is a second list of health conditions. Which conditions on this card, if any, accounted for [this period of/the first period of/this periods of/this time of/the second period of/the third period of] ill health or disability (that you had as an adult)?
Interviewer: Please code all that apply.

1. Leukaemia or lymphoma
2. Cancer or malignant tumour (excluding minor skin cancers)
3. Emotional, nervous, or psychiatric problem
4. Fatigue, e.g. with ME, MS
5. Gynaecological (women's) problem
6. Eyesight problems
7. Infectious disease (e.g. shingles, mumps, TB, HIV)
8. Allergies (other than asthma, e.g. food intolerance, hay fever)
96. None of these
97. Other

HS057 SPECIFY OTHER SERIOUS CONDITION
Please specify.

_____

HS060 WHEN DID ILLNESS PERIOD STOP
If at all, when did this period of ill health or disability end?
Interviewer: Please code 9997 if this period is not finished.

_____ (1900..9997)

HS061 DID FAMILY AND FRIENDS HELP ILLNESS PERIOD
Did your family or friends help you to deal with this health problem, for example by providing money or care?

1. No, not at all
2. Yes, somewhat
3. Yes, a lot

HS062 EXPERIENCES AT WORK BECAUSE OF ILLNESS PERIOD
You told us that you were working at least partially during this time. Please look at showcard 29. Because of this period of ill health, did you experience any of the following?
Interviewer: Please code all that apply.

1. Denied promotions
2. Assignment to a task with fewer responsibilities
3. Working on tasks below your qualifications
4. Harassment by your boss or colleagues
5. Pay cuts
96. None of these

HS063 CONSEQUENCES OF ILLNESS PERIOD
Please look at showcard 30. What long-term effects, if any, has injury, ill health or disability had on your life?
Interviewer: Please code all that apply.

1. Limited my opportunities for paid work
2. Had a negative effect on my family life
3. Had a positive effect on my family life
4. Made my social life more difficult
5. Limited my leisure activities
6. Made me determined to get the best out of life
7. Opened up new opportunities
96. None of these
97. Other

HS064 SPECIFY OTHER CONSEQUENCES OF HEALTH
Please specify.

_____

HS065 END OF HEALTH SECTION
Interviewer This is the end of the health section. Press 1 and <ENTER> to continue.

1. Continue

HS066 PROXY CHECK
Interviewer Please check. Who answered the questions in this section?

1. Respondent only

2. Respondent and proxy
3. Proxy only

HC-Module: Health Care History

HC001 START OF CHILDHOOD HEALTH CARE
I now have some questions concerning your health care during your life.
Interviewer Press 1 and ENTER to continue.

1. Continue

HC002 VACCINATIONS DURING CHILDHOOD
During your childhood, that is, from when you were born up to and including age 15, have you received any vaccinations?

1. Yes
5. No

HC003 REASONS FOR NO CHILDHOOD VACCINATIONS
Please look at showcard 31. What are the reasons you have not received any vaccinations (during your childhood)?
Interviewer: Please code all that apply.

1. Not affordable
2. Not covered by health insurance
3. Did not have health insurance
4. Time constraints
5. Not enough information about this type of care
6. Not usual to get this type of care
7. No place to receive this type of care close to home
8. Not considered to be necessary
97. Other reasons

HC005 USUAL SOURCE OF CARE
Have you always had a usual source of care, that is, a particular person or a place that you went to when you were sick or you needed advice about your health?
Interviewer: A usual source of care could be a doctor, a nurse, or a health care center.

1. Yes
5. No

HC005a WHEN NO USUAL SOURCE OF CARE
Please look at showcard 32. Please specify the periods in which you did not have such a usual source of care.
Interviewer: Please code all that apply.

1. When I was between 0-15 years old.
2. When I was between 16-25 years old.
3. When I was between 26-40 years old.
4. When I was between 41-55 years old.
5. When I was between 56-65 years old.
6. When I was between 66-75 years old.
7. When I was older than 75 years old.

HC015 EVER REGULAR DENTIST
Have you ever gone to a dentist regularly for check-ups or dental care?

1. Yes
5. No

HC016 CHILDHOOD REGULAR DENTIST
Did you start going regularly to the dentist during your childhood (that is, from when you were born up to and including age 15)?

1. Yes
5. No

HC017 YEAR REGULAR DENTIST
In which year did you start going (regularly to the dentist for checkups or dental care)?

_____ (1900..2009)

HC025 FREQUENCY REGULAR DENTIST
When you were going to the dentist regularly, how often was that on average?
Interviewer: Please read out loud.

1. At least once a year
2. Not every year, but at least every two years
3. Less often

HC018 CONTINUITY REGULAR DENTIST
Since then, have you always gone regularly (to the dentist for checkups or dental care)?

1. Yes
5. No

HC018a WHEN NO DENTAL CARE
Please look at showcard 32.Please specify the periods in which you did not go to a dentist for checkups or dental care regularly.
Interviewer: Please code all that apply.

1. When I was between 0-15 years old.
2. When I was between 16-25 years old.
3. When I was between 26-40 years old.
4. When I was between 41-55 years old.
5. When I was between 56-65 years old.
6. When I was between 66-75 years old.
7. When I was older than 75 years old.

HC026 REASONS FOR NO REGULAR DENTAL CARE
Please look at showcard 31. What are the reasons you [have never gone/weren't going] to a dentist regularly for check-ups or dental care?
Interviewer: Please code all that apply.

1. Not affordable
2. Not covered by health insurance
3. Did not have health insurance
4. Time constraints
5. Not enough information about this type of care
6. Not usual to get this type of care
7. No place to receive this type of care close to home
8. Not considered to be necessary
97. Other reasons

HC028 REGULAR GYNAECOLOGICAL VISITS
Have you ever received gynaecological check-ups regularly over the course of several years?

1. Yes
5. No

HC029 YEAR REGULAR GYN VISITS
In which year did you start receiving gynaecological check-ups regularly?

_____ (1900..2009)

HC037 FREQUENCY REGULAR GYN VISITS
When you were regularly receiving gynaecological check-ups, how often was that on average?
Interviewer: Please read out.

1. At least once a year
2. Not every year, but at least every two years
3. Less often

HC030 CONTINUITY REGULAR GYN VISITS
Since then, have you always had gynaecological check-ups regularly?

1. Yes
5. No

HC030a WHEN NO GYN CHECKS
Please look at showcard 32. Please specify the periods in which you did not have gynaecological check-ups regularly.
Interviewer: Please code all that apply.

1. When I was between 0-15 years old.
2. When I was between 16-25 years old.
3. When I was between 26-40 years old.
4. When I was between 41-55 years old.
5. When I was between 56-65 years old.
6. When I was between 66-75 years old.
7. When I was older than 75 years old.

HC038 REASONS FOR NO REGULAR GYN VISITS
Please look at showcard 31. What are the reasons you [have never received/stopped receiving] gynaecological check-ups regularly?
Interviewer: Please code all that apply.

1. Not affordable
2. Not covered by health insurance
3. Did not have health insurance
4. Time constraints
5. Not enough information about this type of care
6. Not usual to get this type of care
7. No place to receive this type of care close to home
8. Not considered to be necessary
97. Other reasons

HC040 REGULAR BLOOD PRESSURE CHECKS
Have you ever had your blood pressure checked regularly over the course of several years?

1. Yes
5. No

HC041 YEAR REGULAR BLOOD PRESSURE
In which year did you start having your blood pressure checked regularly?

_____ (1900..2009)

HC049 FREQUENCY REGULAR BLOOD PRESSURE
(When you were having your blood pressure checked regularly,) How often was that on average?
Interviewer: Please read out loud.

1. At least once a year
2. Not every year, but at least every two years
3. Less often

HC042 CONTINUITY REGULAR BLOOD PRESSURE
Since then, have you always had your blood pressure checked regularly?

1. Yes
5. No

HC042a WHEN NO BLOOD PRESSURE
Please look at showcard 32. Please specify the periods in which you did not have your blood pressure checked regularly.
Interviewer: Please code all that apply.

1. When I was between 0-15 years old.
2. When I was between 16-25 years old.
3. When I was between 26-40 years old.
4. When I was between 41-55 years old.
5. When I was between 56-65 years old.
6. When I was between 66-75 years old.
7. When I was older than 75 years old.

HC050 REASONS FOR NO REGULAR BLOOD PRESSURE
Please look at showcard 31. What are the reasons you [have never had/stopped having] your blood pressure checked regularly?
Interviewer: Please code all that apply.

1. Not affordable
2. Not covered by health insurance
3. Did not have health insurance
4. Time constraints
5. Not enough information about this type of care
6. Not usual to get this type of care
7. No place to receive this type of care close to home
8. Not considered to be necessary
97. Other reasons

HC052 REGULAR BLOOD TESTS
Have you ever had your blood tested regularly over the course of several years, for example for measurements of cholesterol or blood sugar?

1. Yes
5. No

HC053 YEAR REGULAR BLOOD TESTS
In which year did you start having your blood tested regularly?

_____ (1900..2009)

HC061 FREQUENCY REGULAR BLOOD TESTS
When you were having your blood tested regularly, how often was that on average?
Interviewer: Please read out.

1. At least once a year
2. Not every year, but at least every two years
3. Less often

HC054 CONTINUITY REGULAR BLOOD TESTS
Since then, have you always had your blood tested regularly?

1. Yes
5. No

HC054a WHEN NO BLOOD TESTS
Please look at showcard 32. Please specify the periods in which you did not have your blood tested in a laboratory regularly.
Interviewer: Please code all that apply.

1. When I was between 0-15 years old.
2. When I was between 16-25 years old.
3. When I was between 26-40 years old.
4. When I was between 41-55 years old.
5. When I was between 56-65 years old.
6. When I was between 66-75 years old.
7. When I was older than 75 years old.

HC062 REASONS FOR NO REGULAR BLOOD TESTS
Please look at showcard 31. What are the reasons you [have never had/stopped having] your blood tested regularly?
Interviewer: Please code all that apply.

1. Not affordable
2. Not covered by health insurance
3. Did not have health insurance
4. Time constraints
5. Not enough information about this type of care
6. Not usual to get this type of care
7. No place to receive this type of care close to home
8. Not considered to be necessary
97. Other reasons

HC064 REGULAR MAMMOGRAMS
Have you ever had mammograms regularly over the course of several years?

1. Yes
5. No

HC065 YEAR REGULAR MAMMOGRAMS
In which year did you start having mammograms regularly?

_____ (1900..2009)

HC073 FREQUENCY REGULAR MAMMOGRAMS
When you were having mammograms, how often was that on average?
Interviewer: Please read out

1. At least once a year
2. Not every year, but at least every two years
3. Less often

HC066 CONTINUITY REGULAR MAMMOGRAMS
Since then, have you always had mammograms regularly?

1. Yes
5. No

HC066a WHEN NO MAMMOGRAPHY
Please look at showcard 32. Please specify the periods in which you did not have mammograms regularly.
Interviewer: Please code all that apply.

1. When I was between 0-15 years old.
2. When I was between 16-25 years old.
3. When I was between 26-40 years old.
4. When I was between 41-55 years old.
5. When I was between 56-65 years old.
6. When I was between 66-75 years old.
7. When I was older than 75 years old.

HC074 REASONS FOR NO REGULAR MAMMOGRAMS
Please look at showcard 31. What are the reasons you [have never had/stopped having] mammograms regularly?
Interviewer: Please code all that apply.

1. Not affordable
2. Not covered by health insurance
3. Did not have health insurance
4. Time constraints
5. Not enough information about this type of care
6. Not usual to get this type of care
7. No place to receive this type of care close to home
8. Not considered to be necessary
97. Other reasons

HC076 REGULAR VISION TESTS
Have you ever received vision tests regularly over the course of several years?

1. Yes
5. No

HC077 YEAR REGULAR VISION TESTS
In which year did you start receiving vision tests regularly?

_____ (1900..2009)

HC085 FREQUENCY REGULAR VISION TESTS
When you were having vision tests regularly, how often was that on average?
Interviewer: Please read out.

1. At least once a year
2. Not every year, but at least every two years
3. Less often

HC078 CONTINUITY REGULAR VISION TESTS
Since then, have you always had vision tests regularly?

1. Yes
5. No

HC078a WHEN NO VISION TESTS
Please look at showcard 32. Please specify the periods in which you did not have vision tests regularly.
Interviewer: Please code all that apply.

1. When I was between 0-15 years old.
2. When I was between 16-25 years old.
3. When I was between 26-40 years old.
4. When I was between 41-55 years old.
5. When I was between 56-65 years old.
6. When I was between 66-75 years old.
7. When I was older than 75 years old.

HC086 REASONS FOR NO REGULAR VISION TESTS
Please look at showcard 31. What are the reasons you [have never had/stopped having] vision tests regularly?
Interviewer: Please code all that apply.

1. Not affordable
2. Not covered by health insurance
3. Did not have health insurance
4. Time constraints
5. Not enough information about this type of care
6. Not usual to get this type of care
7. No place to receive this type of care close to home
8. Not considered to be necessary
97. Other reasons

HC088 CHANGES IN BEHAVIOR
Please look at showcard 33. During your life, have you ever engaged in any of the following activities for at least a year to improve your health?
Interviewer: Please only consider behaviour lasting for at least one year. Code all that apply.

1. Increased your physical activity
2. Changed your diet
3. Stopped smoking
4. Reduced your alcohol consumption
96. None of these

HC089 START OF BEHAVIOUR CHANGE
Please look at showcard 32. Please specify the periods in which you [increased your physical activity/changed your diet/stopped smoking/reduced your alcohol consumption].
Interviewer: Please code all that apply.

1. When I was between 0-15 years old.
2. When I was between 16-25 years old.
3. When I was between 26-40 years old.
4. When I was between 41-55 years old.
5. When I was between 56-65 years old.
6. When I was between 66-75 years old.
7. When I was older than 75 years old.

HC097 END OF HEALTH CARE SECTION
Interviewer: This is the end of the health care module. Press 1 and <ENTER> to continue.

1. Continue

HC098 PROXY CHECK
Interviewer: Please check. Who answered the questions in this section?

1. Respondent only
2. Respondent and proxy
3. Proxy only

GL-Module: General Life and Persecution History

GL001 INTRODUCTION TO GENERAL LIFE QUESTIONS
I now have some general questions about certain periods in your life.
Interviewer: Press 1 and ENTER to continue.

1. Continue

GL002 PERIOD OF HAPPINESS
Looking back on your life, was there a distinct period during which you were happier than during the rest of your life?

1. Yes
5. No

GL003 WHEN HAPPINESS PERIOD STARTED
When did this period of happiness start?

_____ (1900..2009)

GL004 WHEN HAPPINESS PERIOD STOPPED
When did this period stop?
Interviewer: Please code 9997 if this period is still ongoing

_____ (1900..9997)

GL005 PERIOD OF STRESS
(Looking back on your life,) was there a distinct period during which you were under more stress compared to the rest of your life?

1. Yes
5. No

GL006 WHEN STRESS PERIOD STARTED
When did this stress period start?

_____ (1900..2009)

GL007 WHEN STRESS PERIOD STOPPED
When did this period stop?
Interviewer: Please code 9997 if this period is still ongoing

_____ (1900..9997)

GL008 PERIOD OF POOR HEALTH
(Looking back on your life,) was there a distinct period during which your health was poor compared to the rest of your life?

1. Yes
5. No

GL009 WHEN POOR HEALTH PERIOD STARTED
When did this period of poor health start?

_____ (1900..2009)

GL010 WHEN POOR HEALTH PERIOD STOPPED
When did this period stop?
Interviewer: Please code 9997 if this period is still ongoing

_____ (1900..9997)

GL011 PERIOD OF FINANCIAL HARDSHIP
(Looking back on your life,) was there a distinct period of financial hardship?

1. Yes
5. No

GL012 WHEN FINANCIAL HARDSHIP PERIOD STARTED
When did this period of financial hardship start?

_____ (1900..2009)

GL013 WHEN FINANCIAL HARDSHIP PERIOD STOPPED
When did this period stop?
Interviewer: Please code 9997 if this period is still ongoing

_____ (1900..9997)

GL014 PERIOD OF HUNGER
(Looking back on your life,) was there a period during which you suffered from hunger?

1. Yes
5. No

GL015 WHEN HUNGER PERIOD STARTED
When did this period of hunger start?

_____ (1900..2009)

GL016 WHEN HUNGER PERIOD STOPPED
When did this period stop?
Interviewer: Please code 9997 if this period is still ongoing

_____ (1900..9997)

GL022 DISCRIMINATED AGAINST
There are times, in which people are persecuted or discriminated against, for example because of their political beliefs, religion, nationality, ethnicity, sexual orientation or their background. People may also be persecuted or discriminated against because of the political beliefs or the religion of their close relatives. Have you ever been the victim of such persecution or discrimination?
Interviewer: "Background" includes such things as class background, family origin, etc

1. Yes
5. No

GL023 MAIN REASON OF PERSECUTION
What was the main reason you were persecuted or discriminated against?
Interviewer: Please read out. Code only one.

1. Your political beliefs
2. Your religion
3. Your ethnicity or nationality
4. Your sexual orientation
5. Your background
6. Political beliefs or religion of your close relatives
97. SPONTANEOUS only: Other reasons

GL023a OTHER REASON OF PERSECUTION
For what other reason were you persecuted or discriminated against?

_____

GL024 Forced to stop working
Did persecution or discrimination because of {main reason for persecution} ever force you to stop working in a job?

1. Yes
5. No

GL025 STOPPED JOBS BECAUSE OF PERSECUTION
In which jobs was that?

_____

GL026 EXPERIENCES IN JOB
As a consequence of persecution or discrimination because of {main reason for persecution}, did you ever experience any of the following during your working life?
Interviewer: Please read out. Code all that apply.

1. Denied promotions
2. Assignment to a task with fewer responsibilities
3. Working on tasks below your qualifications
4. Harassment by your boss or colleagues
5. Pay cuts
96. None of these

GL027 WHICH JOBS CONSEQUENCE OF PERSECUTION
In which jobs was that?

_____

GL028 DIFFICULTIES FINDING A JOB BECAUSE OF REASON FOR PERSECUTION
Have you ever had difficulties finding a job adequate to your qualifications because of {main reason for persecution}?

1. Yes
5. No

GL029 FIRST EXPERIENCE DIFFICULTIES FINDING A JOB
In what year did you first experience these difficulties?

_____ (1900..2009)

GL030 CAMP BECAUSE OF REASON FOR PERSECUTION
You told us earlier that you [lived in a prison/lived in a prisoner of war camp /lived in labor camp/lived in a concentration camp/had to do forced labor or were in jail/were exiled or banished]. Was this because of {main reason for persecution}?

1. Yes
5. No

GL031 DISPOSSESSED BECAUSE OF REASON FOR PERSECUTION
There may be cases when individuals and their families are dispossessed of their property as a result of war or persecution. Were you or your family ever dispossessed of any property as a result of war or persecution?

1. Yes
5. No

GL033 WHEN PROPERTY TAKEN AWAY
When was the [first time/next time] that your or your family's property was taken away as a result of war or persecution?

_____ (1900..2009)

GL032 TYPE OF PROPERTY
What type of property was this?
Interviewer: Please read outCode all that apply.

1. Businesses or companies
2. Houses or buildings
3. Farmland or other land
4. Flat or apartment
5. Money or assets

GL034 COMPENSATED
Were you or your family *ever* compensated for this dispossession?
Interviewer: Please read out.

1. Yes, fully
3. Yes, partially
5. No

GL035 ANOTHER TIME DISPOSSESSED OF ANY PROPERTY
Was there another time you or your family was dispossessed of any property as a result of war or persecution?

1. Yes
5. No

GL017 INTRODUCTION TO FINAL QUESTION
So far we have asked you about some specific areas of your life. We understand that there may be other aspects of your life that are important.
Interviewer: Press 1 and ENTER to continue.

1. Continue

GL018 ANYTHING ELSE THAT HAS HAPPENED
Is there anything else that has happened in your life that you'd like to tell us about?

1. Yes
5. No

GL019 DETAILS OF WHAT ELSE HAPPENED
Interviewer: Please enter details of event mentioned. Press NEXT or ALT+N to continue.

_____

GL036 PROXY CHECK
Interviewer: Please check. Who answered the questions in this section?

1. Respondent only
2. Respondent and proxy
3. Proxy only

GS-Module: Grip Strength Measure

ON001 INTRODUCTION TO WAVE 3 FORWARD QUESTIONS
As you know, *"50+ in Europe"* is a study over multiple periods. Although this interview was very different to the previous ones, we are interested in some measures that can connect directly with information we collected earlier. This is just the measure of your grip strength you may remember from the last interview.
Interviewer: Press 1 and ENTER to continue.

1. Continue

GS001 WILLING TO HAVE HANDGRIP MEASURED
Now I would like to assess the strength of your hand in a gripping exercise. I will ask you to squeeze this handle as hard as you can, just for a couple of seconds and then let go. I will take two alternate measurements from your right and your left hand. Would you be willing to have your handgrip measured?
Interviewer: Demonstrate grip strength measure.

1. R agrees to take measurement
2. R refuses to take measurement
3. R is unable to take measurement

GS010 WHY NOT COMPLETED GS TEST
Interviewer: Why didn't Respondent complete the grip strength test? Code all that apply.

1. R felt it would not be safe
2. IWER felt it would not be safe
3. R refused, no reason given
4. R tried but was unable to complete test
5. R did not understand the instructions
6. R had surgery, injury, swelling, etc. on both hands in past 6 months
97. Other (Specify)

GS011 OTHER REASON
Interviewer: Specify other reason

_____

GS002 RECORD RESPONDENT STATUS
Interviewer: Record respondent status

1. Respondent has the use of both hands
2. Respondent is unable to use right hand
3. Respondent is unable to use left hand

GS003 END OF TEST BECAUSE RESPONDENT IS UNABLE OR NOT WILLING TO DO TEST INTERVIEWER STOP TEST.
Interviewer: No handgrip measurement to be taken

1. Continue

GS004 DOMINANT HAND
Which is your dominant hand?

1. Right hand
2. Left hand

GS005 INTRODUCTION TO TEST
Interviewer: Position the respondent correctly. Adjust dynomometer to hand size by turning the lever and reset arrow at zero. Explain the procedure once again. Let respondent have a practice with one hand. Use scorecard to record the results and enter results into computer after test is finished.

1. Continue

GS006 FIRST MEASUREMENT, LEFT HAND LEFT HAND, FIRST MEASUREMENT.
Interviewer: Enter the results to the nearest integer value.

_____ (0..100)

GS007 SECOND MEASUREMENT, LEFT HAND LEFT HAND, SECOND MEASUREMENT.
Interviewer: Enter the results to the nearest integer value.

_____ (0..100)

GS008 FIRST MEASUREMENT, RIGHT HAND RIGHT HAND, FIRST MEASUREMENT.
Interviewer: Enter the results to the nearest integer value.

_____ (0..100)

GS009 SECOND MEASUREMENT, RIGHT HAND RIGHT HAND, SECOND MEASUREMENT.
Interviewer: Enter the results to the nearest integer value.

_____ (0..100)

GS012 HOW MUCH EFFORT R GAVE
Interviewer: How much effort did R give to this measurement?

1. R gave full effort
2. R was prevented from giving full effort by illness, pain, or other symptoms or discomforts
3. R did not appear to give full effort, but no obvious reason for this

---

GS013 THE POSITION OF R FOR THIS TEST
Interviewer: What was the R's position for this test?

1. Standing
2. Sitting
3. Lying down

GS014 R RESTED HIS/HER ARMS ON A SUPPORT
Interviewer: Did R rest his/her arms on a support while performing this test?

1. Yes
5. No

EX004 END OF INTERVIEW
This is the end of this section. Thank you for your participation.
Interviewer: Press 1 and ENTER to continue.

1. Continue

EX001 CONSENT TO VISIT AGAIN
Thank you. This was the last question. We would like to thank you very much again for participating in our research project. It is very likely that this research project will continue in two years with another interview. For this reason, we hope that it is ok with you that we keep your name and address in our files, so that we can contact you again. Is this ok?
Interviewer: Let respondent sign consent statement if necessary. If the respondent hesitates, say that [he/she] can still say no at the time when recontacting.

1. Consent to recontact
5. No consent to recontact

LS002 CHECK FOR MISSINGS
Interviewer: Press 1 and ENTER to check whether there were any questions missed.

1. Continue

LS001 OUTRO
This is the end of the life history interview. Thank you for taking the time to answer our questions.
Interviewer: Please close your laptop down now. Remember to answer observation questions when you have left the respondent's house. Thank you. Press 1 and ENTER to continue.

1. Continue

IV-Module: Interviewer Observations

IV001 INTRODUCTION TO IV
This section is about your observations during the interview and should be filled out after each completed individual interview.

1. Continue

IV021 RELATIONSHIP PROXY TO RESPONDENT
A proxy respondent has answered some or all of the questions we had for {name of the respondent}. How is the proxy respondent related to {name of the respondent}?

1. Spouse/Partner
2. Child/child- in-law
3. Parent/ Parent- in-law
4. Sibling
5. Grand-child
6. Other relative
7. Nursing home staff
8. Home helper
9. Friend/acquaintance
97. Other

IV002 THIRD PERSONS PRESENT
Were any third persons, (except for a proxy respondent), present during (parts of) the interview with {name of respondent}?
Interviewer: Code all that apply.

1. Nobody
2. Spouse or partner
3. Parent or parents
4. Child or children
5. Other relatives
6. Other persons present

IV003 INTERVENED IN INTERVIEW
Have these persons intervened in the interview?

1. Yes, often
2. Yes, occasionally
3. No

IV003a FILLED IN APPOINTMENT CARD
Did the respondent fill out the appointment card before the interview started?

1. Yes
5. No

IV003b USED INCENTIVE
Did you use an incentive for this interview?

1. Yes
5. No

IV003c FORM OF INCENTIVE
Was this in form of money, a voucher or a gift?

1. Money
2. Voucher
3. Gift

IV003d WORTH OF INCENTIVE
What was the worth of the incentive?

1. Less than 5 Euro
2. Between 5 and less 10 Euro
3. Between 10 and less 15 Euro
4. 15 Euro or more

IV004 WILLINGNESS TO ANSWER
How would you describe the willingness of {name of respondent} to answer?

1. Very good
2. Good
3. Fair
4. Bad
5. Good in the beginning, got worse during the interview
6. Bad in the beginning, got better during the interview

IV005 WHY WILLINGNESS WORSE
Why did the respondent's willingness to answer get worse during the interview?
Interviewer: Code all that apply.

1. The respondent was losing interest
2. The respondent was losing concentration or was getting tired
97. Other, please specify

IV006 WHICH OTHER REASON
What other reason?

_____

IV007 RESP. ASK FOR CLARIFICATION
Did {name of respondent} ask for clarification on any questions?

1. Never
2. Almost never
3. Now and then
4. Often
5. Very often
6. Always

IV008 RESPONDENT UNDERSTOOD QUESTIONS
Overall, did you feel that {name of respondent} understood the questions?

1. Never
2. Almost never
3. Now and then
4. Often
5. Very often
6. Always

IV009 HELP NEEDED READING SHOWCARDS
Did the respondent need any help reading the showcards during the interview?

1. Yes, due to sight problems
2. Yes, due to literacy problems
3. No

IV010 INTERVIEW IN HOUSE OF RESPONDENT
Was the interview conducted in the house of the respondent?

1. Yes
5. No

IV011 WHICH AREA BUILDING LOCATED
In which type of area is the building located?

1. A big city
2. The suburbs or outskirts of a big city
3. A large town
4. A small town
5. A rural area or village

IV012 TYPE OF BUILDING
Which type of building does the household live in?

1. A farm house
2. A free standing one or two family house
3. A one or two family house as row or double house
4. A building with 3 to 8 flats
5. A building with 9 or more flats but no more than 8 floors
6. A high-rise with 9 or more floors
7. A housing complex with services for elderly
8. Special housing for elderly (24 hours attention)

IV013 NUMBER OF FLOORS OF BUILDING
Including the ground floor, how many floors does the building have?

_____ (1..99)

IV014 NUMBER OF STEPS TO ENTRANCE
How many steps had to be climbed (up or down) to get to the main entrance of the household's flat?
Interviewer: Do not include steps that are avoided, because the block has an elevator.

1. Up to 5
2. 6 to 15
3. 16 to 25
4. More than 25

IV015 INTERVIEWER ID
Your interviewer ID:

_____

IV020 OUTRO IV
Thank you very much for completing this section.

1. Finish Interview and go back to SMS.

Showcards

CARD 1

1. Spouse
2. Partner
3. Child
4. Child-in-law
5. Parent
6. Parent-in-law
7. Sibling
8. Grand-child
9. Other relative (specify)
10. Other non-relative (specify)
11. Ex-Spouse/Ex-Partner

CARD 2

1. Income from employment (including self-employment)

2. Financial support from Spouse or Partner

3. Maternity benefits from state, employer or other institutions

4. Child benefits from state or other institutions

5. Financial support from Family (not Spouse/Partner) and friends

6. Running down financial assets or bank accounts

97. Other

CARD 3

1. Lived in a children's home
2. Been fostered with another family
3. Evacuated or relocated during a war
4. Lived in a prisoner of war camp
5. Lived in prison
6. Lived in a labour camp
7. Lived in a concentration camp
8. Been an inpatient in a TB institution
9. Stayed in a psychiatric hospital
10. Been homeless for 1 month or more

96. None of these

CARD 4

1. Boarding school or university accommodation
2. Orphanage or Children’s home
3. Housing with the armed forces
4. Mental hospital
5. Other hospital
6. Nursing home for the elderly
7. Prison
8. Prisoner of war camp
9. Labour camp
10. Concentration camp
97. Other

CARD 5

1. Austria
2. Belgium
3. Czech Republic
4. Denmark
5. Finland
6. France
7. Germany
8. Greece
9. Hungary
10. Ireland
11. Italy
12. Netherlands
13. Norway
14. Poland
15. Portugal
16. Slovakia
17. Spain
18. Sweden
19. Switzerland
21. Russia
22. United States
23. Other European country
24. Non-European country

CARD 6

1. North East
2. North West
3. Yorkshire and the Humber
4. East Midlands
5. West Midlands
6. East
7. London
8. South East
9. South West

CARD 7

1. Purchased or built it with own means

2. Purchased or built it with a mortgage

3. Purchased or built it with help from family

4. Received it as a bequest

5. Received it as a gift

6. Acquired it through other means

CARD 8

1. Biological mother
2. Biological father
3. Adoptive, step or foster mother
4. Adoptive, step or foster father
5. Biological brother(s) or sister(s)
6. Adoptive, step, foster or half brother(s) or sister(s)
7. Grandparent(s)
8. Other relative(s) - specify at later question
9. Other non-relative(s) - specify at later question

CARD 9

1. Fixed bath
2. Cold running water supply
3. Hot running water supply
4. Inside toilet
5. Central heating

96. None of these

CARD 10

1. None or very few (0-10 books)

2. Enough to fill one shelf (11-25 books)

3. Enough to fill one bookcase (26-100 books)

4. Enough to fill two bookcases (101-200 books)

5. Enough to fill two or more bookcases (more than 200 books)

CARD 11

1. Legislator, senior official or manager
2. Professional
3. Technician or associate professional
4. Clerk
5. Service, shop or market sales worker
6. Skilled agricultural or fishery worker
7. Craft or related trades worker
8. Plant/machine operator or assembler
9. Elementary occupation
10. Armed forces

CARD 12

1. Employee or self-employed
2. Unemployed and searching for a job
3. Unemployed but not searching for a job
4. Short term job (less than 6 months)
5. Sick or disabled
6. Looking after home or family
7. Leisure, travelling or doing nothing
8. Retired from work
9. Training
10. Further full time education
11. Military services, war prisoner or equivalent (excluding professional army employment)
12. Managing your assets
13. Voluntary or community work
14. Forced labour or in jail
15. Exiled or banished
16. Labour camp
17. Concentration camp

97. Other

CARD 13

2. Unemployed and searching for a job
3. Unemployed but not searching for a job
4. Short term job (less than 6 months)
5. Sick or disabled
6. Looking after home or family
7. Leisure, travelling or doing nothing
9. Training
11. Military services, war prisoner or equivalent (excluding professional army employment)
12. Managing your assets
13. Voluntary or community work
14. Forced labour or in jail
15. Exiled or banished
16. Labour camp
17. Concentration camp
97. Other

CARD 14

2. Unemployed and searching for a job
3. Unemployed but not searching for a job
4. Short term job (less than 6 months)
5. Sick or disabled
6. Looking after home or family
7. Leisure, travelling or doing nothing
9. Training
10. Further full time education
11. Military services, war prisoner or equivalent (excluding professional army employment)
12. Managing your assets
13. Voluntary or community work
14. Forced labour or in jail
15. Exiled or banished
16. Labour camp
17. Concentration camp
97. Other

CARD 15

1. Legislator, senior official or manager
   (examples)

2. Professional
   (examples)

3. Technician or associate professional
   (examples)

4. Clerk
   (examples)

5. Service, shop or market sale worker
   (examples)

6. Skilled agricultural or fishery worker
   (examples)

7. Craft or related trades worker
   (examples)

8. Plant/machine operator or assembler
   (examples)

9. Elementary occupation
   (examples)

10. Armed forces
    (examples)

CARD 16

1. Agriculture, hunting, forestry, fishing
2. Mining and quarrying
3. Manufacturing
4. Electricity, gas and water supply
5. Construction
6. Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods
7. Hotels and restaurants
8. Transport, storage and communication
9. Financial intermediation
10. Real estate, renting and business activities
11. Public administration and defence; compulsory social security
12. Education
13. Health and social work
14. Other community, social and personal service activities

CARD 17

1. To take care of own children or grandchildren

2. To take care of parents

3. To take care of other relatives

4. Because of health problems

5. Education/training

6. A full-time job was not available (anymore)

7. Went into partial retirement

97. Other

CARD 18

1. I resigned
2. I was laid off
3. By mutual agreement
4. My plant or office closed down
5. A temporary job had been completed
6. I retired

97. Other reason

CARD 19

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

CARD 20

2. Unemployed and searching for a job
3. Unemployed but not searching for a job
4. Short term job (less than 6 months)
5. Sick or disabled
6. Looking after home or family
7. Leisure, travelling or doing nothing
8. Retired from work
9. Training
10. Further full time education
11. Military services, war prisoner or equivalent (excluding professional army employment)
12. Managing your assets
13. Voluntary or community work
14. Forced labour or in jail
15. Exiled or banished
16. Labour camp
17. Concentration camp
97. Other

CARD 21

1. Financial support from spouse or partner

2. Support from family (not Spouse/Partner) and friends

3. Private or public disability insurance

4. Benefits or grants from state or other institutions

5. Sold property

6. Running down financial asset or bank account

97. Other

CARD 22

2. Unemployed and searching for a job
3. Unemployed but not searching for a job
4. Short term job (less than 6 months)
5. Sick or disabled
6. Looking after home or family
7. Leisure, travelling or doing nothing
8. Retired from work
9. Training
10. Further full time education
11. Military services, war prisoner or equivalent (excluding professional army employment)
12. Managing your assets
13. Voluntary or community work
14. Forced labour or in jail
15. Exiled or banished
16. Labour camp
17. Concentration camp

97. Other

CARD 23

F.			up to	€	500
B.	€	501	up to	€	1,000
G.	€	1,001	up to	€	1,500
T.	€	1,501	up to	€	2,000
N.	€	2,001	up to	€	2,500
L.	€	2,501	up to	€	3,000
R.	€	3,001	up to	€	3,500
K.	€	3,501	up to	€	4,000
D.	€	4,001	up to	€	5,000
H.	€	5,001	up to	€	7,500
U.	€	7,501	up to	€	10,000
E.	€	10,001	or more		

CARD 24

1. Infectious disease (e.g. measles, rubella, chickenpox, mumps, tuberculosis, diphtheria, scarlet fever)
2. Polio
3. Asthma
4. Respiratory problems other than asthma
5. Allergies (other than asthma)
6. Severe diarrhoea
7. Meningitis/encephalitis
8. Chronic ear problems
9. Speech impairment
10. Difficulty seeing even with eyeglasses

96. None of these

CARD 25

1. Severe headaches or migraines
2. Epilepsy, fits or seizures
3. Emotional, nervous, or psychiatric problem
4. Broken bones, fractures
5. Appendicitis
6. Childhood diabetes or high blood sugar
7. Heart trouble
8. Leukaemia or lymphoma
9. Cancer or malignant tumour (excluding minor skin cancers)

96. None of these

97. Other serious health condition (please specify)

CARD 26

1. When I was between 0-5 years old

2. When I was between 6-10 years old

3. When I was between 11-15 years old

CARD 27

1. Back pain
2. Arthritis, including osteoarthritis and rheumatism
3. Osteoporosis
4. Angina or heart attack (including myocardial infarction or coronary thrombosis)
5. Other heart disease
6. Diabetes or high blood sugar
7. Stroke
8. Asthma
9. Respiratory problems other than asthma (e.g. bronchitis, chronic obstructive pulmonary disease)
10. Tuberculosis
11. Severe headaches or migraines

96. None of these

CARD 28

1. Leukaemia or lymphoma

2. Cancer or malignant tumour (excluding minor skin cancers)

3. Emotional, nervous, or psychiatric problem

4. Fatigue, e.g. with immune dysfunction syndrome or multiple sclerosis

5. Gynaecological (women's) problem

6. Eyesight problems

7. Infectious disease (e.g. shingles, mumps, TB, HIV)

8. Allergies (other than asthma, e.g. food intolerance, hay fever)

96. None of these

97. Other

CARD 29

1. Denied promotions

2. Assignment to a task with fewer responsibilities

3. Working on tasks below your qualifications

4. Harassment by your boss or colleagues

5. Pay cuts

96. None of these

CARD 30

1. Limited my opportunities for paid work

2. Had a negative effect on my family life

3. Had a positive effect on my family life

4. Made my social life more difficult

5. Limited my leisure activities

6. Made me determined to get the best out of life

7. Opened up new opportunities

96. None of these

97. Other

CARD 31

1. Not affordable
2. Not covered by health insurance
3. Did not have health insurance
4. Time constraints
5. Not enough information about this type of care
6. Not usual to get this type of care
7. No place to receive this type of care close to home
8. Not considered to be necessary

97. Other reasons

CARD 32

1. When I was between 0-15 years old
2. When I was between 16-25 years old
3. When I was between 26-40 years old
4. When I was between 41-55 years old
5. When I was between 56-65 years old
6. When I was between 66-75 years old
7. When I was older than 75 years old

CARD 33

1. Increased your physical activity

2. Changed your diet

3. Stopped smoking

4. Reduced your alcohol consumption

96. None of these