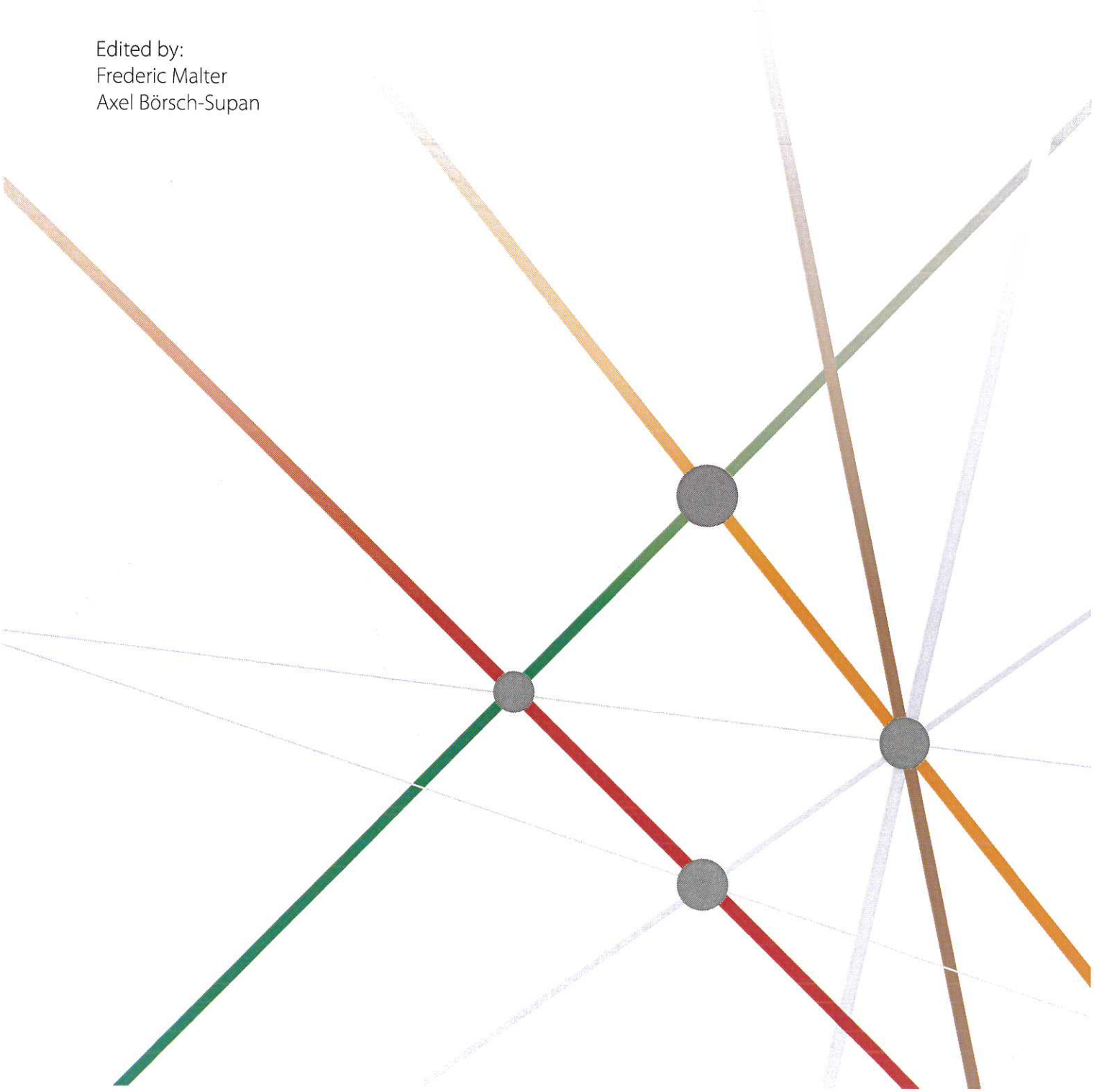
SHARE
Survey of Health, Ageing and Retirement in Europe

SHARE Wave 5:
Innovations & Methodology

Edited by:
Frederic Malter
Axel Börsch-Supan



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feedback loop B in Figure 2.2). In the next step, the generic English questionnaire is imported into the online SHARE translation tool, the so-called "Translation Management Utility" (TMT, see chapter 3 for details) so that national country teams can translate it into the survey fieldwork language. These country-specific (i.e. translated) CAPI instruments are then tested by the national teams in the same iterative fashion as the generic instrument (i.e. entailing feedback loops with software developers – indicated with the feedback loop C in Figure 2.2). In addition, problems that arise during translation, e.g. issues with the cross-cultural equivalence of question wording, are being fed back to the Questionnaire Board so that the generic English wording can be revised to achieve better cross-cultural applicability (indicated by the sequential feedback loop D in Figure 2.2). The entire process is repeated during the pretest stage of fieldwork which is the second round of testing before the actual main survey. After pretest data collection there is a final review of evidence around new items (e.g. variability, amount of missing data, length etc.) and the decision to keep or drop new content is made by the Questionnaire Board.

2.2 Measuring early childhood circumstances in SHARE Wave 5: A "mini childhood" module

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Longitudinal surveys of ageing face the challenge of establishing how the lives of respondents before entering the survey contribute to observed social, economic, health and well-being outcomes in later life. This is particularly important for surveys like SHARE, which start following people at older ages, as many of the crucial events experienced by respondents before entering the sample will be unknown to researchers, yet they are likely to be essential to understand late-life outcomes. This is a major challenge for social sciences and policy as recent research increasingly highlights the importance of early life circumstances on later life outcomes.

To address this issue, after two waves of "classical" longitudinal data collection, the SHARE project entirely dedicated Wave 3, known as SHARELIFE, to the collection of retrospective life history data (Schröder, 2011). In the fourth wave SHARE returned to a "classical" longitudinal wave. The SHARELIFE questionnaire differed in several ways from the questionnaires of the regular waves by focusing on key events and changes individuals experienced before entering SHARE, using an Event History Calendar.[1] SHARELIFE enables researchers to combine retrospective and contemporaneous/ prospective information and construct a panel dataset that tracked respondents from early childhood through adulthood. SHARELIFE has become a key element of SHARE that has sparked interest in areas that used to be impossible to study with concurrent information from ordinary waves. Obviously, SHARELIFE was collected only among respondents that had entered SHARE in either Wave 1 or Wave 2. This implies that for respondents that entered SHARE in Wave 4 and onwards no retrospective life history information was available. In addition, four new countries joined in the fourth wave and many "old" countries had added large refreshment samples in Wave 4 (see chapter 6 in this book). Many researchers involved with SHARE, emphasised their interest to repeat SHARELIFE for those new respondents absent in Wave 3. To fill this gap, the Wave 5 questionnaire design included a mini-childhood module that aimed to collect key information about early life socioeconomic and health circumstances for respondents who did not participate in SHARELIFE.

[1] See Schröder, Ed. (2011) for further details on SHARELIFE Methodology.

In this chapter, we provide an overview of the mini-childhood module included in Wave 5. First, we discuss the questions selected as part of the module and provide an overview of descriptive statistics of these items. Second, we examine whether commonly observed associations between early childhood circumstances and late-life outcomes could be reproduced using the mini-childhood module applied in Wave 5. The module included questions concerning the health and socioeconomic status when the respondent was 10 years old, and questions on life circumstances from birth to age 15. Except for one, all questions were extracted from the original SHARELIFE questionnaire to enable comparability across the mini-childhood module and retrospective assessments for previous respondents. Due to questionnaire length constraints, however, the module only contained a selection of all SHARELIFE measures. This is due to the fact that, in addition to the mini-childhood module, Wave 5 included all regular assessments on respondent's current circumstances. This chapter provides an overview of the reach and potential of the mini-childhood module applied in Wave 5 to examine early life circumstance and illustrate their importance for understanding late-life outcomes.

2.2.1 Overview of mini-childhood module

The aim of the mini-childhood module was to provide an overview of the early life circumstances of older Europeans aged 50 and older, more specifically in the 14 European countries in which it was fielded (Austria, Belgium, Switzerland, Czech Republic, Germany, Denmark, Estonia, Spain, France, Italy, Luxembourg, Netherlands, Sweden, and Slovenia) and Israel. Unlike SHARELIFE, which focused on experiences over the entire life-course, this mini-module only focused on early childhood circumstances for two reasons: first, the degree of detail required to assess full histories (e.g., of employment, health or financial difficulties) would demand a time-consuming interview that could not be carried out in combination with the regular SHARE Wave 5 modules, because it would exceed the questionnaire length constraints. In SHARELIFE early life circumstances were assessed using a set of crucial questions following the example of other surveys such as HRS and ELSA. Second, the mini-module was implemented because experiences beyond childhood are undeniably essential in understanding older people's life circumstances. There is an increasing interest in how experiences during childhood may be crucial in shaping individual's later-life health, employment, earnings and social networks.[2] The SHARE project offers a unique opportunity to assess these issues by collecting comparable data on early childhood experiences and linking them to health, employment, earnings and social networks in later life.

The mini-module maintained the different "periods of reference" for the different items in SHARELIFE and asked questions concerning the health, socioeconomic status and life circumstances when respondents were 10 years old and when respondents were growing up, from birth to age 15 (15 included). Specifically, survey participants were first asked about characteristics of the accommodation they lived in at the age of 10 (type of residence, number of rooms, number of people living in household, number of books), as well as self-rated levels of school performance (in math and in their country's language) relative to peers at that age. Then they were asked about their socioeconomic status, with a question on family financial situation, health status, diagnoses of various illnesses and vaccinations during childhood from birth to age 15.

[2] See, for instance, the collection of articles in Börsch-Supan, et al., Eds. (2011) and Brandt and Börsch-Supan, Eds. (2013).

All mini-childhood items replicate questions asked in SHARELIFE, so that researchers could have access to a harmonized set of variables for a large sample. The only exception is the question asking respondents whether they would say their family was financially well off, about average, or poor when they were growing up. This is a new question selected from HRS. It had not been asked in SHARE/SHARELIFE previously. We included it to capture overall socioeconomic status in childhood.[3]

The questions in the module were addressed only to respondents who had not had the opportunity to participate in SHARELIFE, mostly because they started participating to the SHARE project after SHARELIFE was fielded. There were 49,877 individuals that answered the module, corresponding to 77 percent of Wave 5 sample participants. Table 2.1 shows item non-response rates (missing answer or refusal) for each of the items included in the module. Similarly to the SHARELIFE experience, non-response rates were very low, ranging from 0.39 percent to 3.40 percent. The items thus seem to have functioned well as there was very limited non-response conditional on survey participation.

Table 2.1: Item non-response in mini childhood module, SHARE Wave 5

Questionnaire item	Item non-response rate %
Living in private residence at age 10	0.56
Rooms when 10 years old	2.14
Number of people living in household when 10	1.41
Number of books when 10	2.47
Relative position to others mathematically when 10	1.44
Relative position to others language when 10	3.40
Financial position family from birth to age 15	0.48
Childhood self-rated health status	0.39
Missed school for 1 month+	0.74
Medical conditions during childhood (0-15)	0.86
Vaccinations during childhood	1.02

Table 2.2 provides basic descriptive statistics of each of the items included in the mini-childhood module. Means and standard deviations of items are presented for items in four overall categories: characteristics of childhood accommodation; childhood school performance and cognitive abilities; childhood socioeconomic circumstances; and health-related items covering childhood self-rated overall health, medical diagnoses during childhood, and access to vaccinations during childhood.

Around 92 percent of respondents reported to have lived in a private residence (a house of apartment the respondent or his parents or guardians owned or rented) at the age of 10. The average number of rooms was around 3.82, and the average number of household members was 5.57. 39 percent of respondents reported that there were few or no books at all at home when they were 10 years old and only 14 percent reported that there were more than a 100 books in their childhood home. 15 percent of respondents reported that

[3] HRS uses 16 as cut-off age. The mini-childhood module uses age 15 in the wording for coherence with the other SHARELIFE questions.

their math performance during school was worse than that of peers, while 13 percent reported worse performance in language during school compared to their peers. 19 percent of SHARE respondents reported that from birth to age 15, their family was poor, while 10 percent reported that their family was well-off.

Table 2.2: Descriptive statistics of mini-childhood module, SHARE Wave 5

Questionnaire item	Mean	SD
Childhood health (age 10)		
Living in private residence at age 10	0.92	0.27
Rooms when 10 years old	3.82	1.95
Number of people living in household when 10	5.57	2.64
Number of books when 10	2.15	1.21
None or very few (0-10 books)	0.39	0.48
Enough to fill one shelf (11-25 books)	0.24	0.42
Enough to fill one bookcase (26-100 books)	0.22	0.41
Enough to fill two bookcases (101-200 books)	0.07	0.25
Enough to fill two or more bookcases (more than 200 books)	0.07	0.25
Childhood cognitive ability (age 10)		
Relative position to others mathematically when 10		
Better/much better	0.29	0.45
The same	0.56	0.49
Worse/much worse	0.15	0.35
Relative position to others language when 10		
Better/much better	0.29	0.45
The same	0.57	0.49
Worse/much worse	0.13	0.34
Childhood SES (age 0-15)		
financial position family from birth to age 15		
Pretty well off financially	0.10	0.30
About average	0.45	0.50
Poor	0.19	0.39
It varied	0.01	0.11

Table 2.2: Descriptive statistics of mini-childhood module, SHARE Wave 5 (cont.)

Questionnaire item	Mean	SD
Childhood health (age 0-15)		
childhood self-rated health status		
Excellent	0.23	0.42
Very good	0.22	0.42
Good	0.22	0.41
Fair	0.06	0.24
Poor	0.02	0.13
It varied a great deal	0.00	0.05
Missed school for 1 month+	0.12	0.33
Medical conditions during childhood (age 0-15)		
Infectious disease	0.80	0.40
Polio	0.01	0.08
Asthma	0.02	0.14
Respiratory problems other than asthma	0.02	0.15
Allergies (other than asthma)	0.04	0.18
Severe diarrhoea	0.01	0.12
Meningitis/encephalitis	0.01	0.09
Chronic ear problems	0.03	0.16
Speech impairment	0.01	0.10
Difficulty seeing even with eyeglasses	0.02	0.16
Tuberculosis	0.01	0.10
Severe headaches or migraines	0.05	0.23
Epilepsy, fits or seizures	0.01	0.08
Emotional, nervous, or psychiatric problem	0.02	0.13
Broken bones, fractures	0.09	0.29
Appendicitis	0.09	0.29
Childhood diabetes or high blood sugar	0.00	0.03
Heart trouble	0.01	0.08
Leukemia or lymphoma	0.00	0.03
Cancer or malignant tumor (excluding minor skin cancers)	0.00	0.03
Access to basic preventive health care (age 0-15)		
Vaccinations during childhood	0.95	0.21

Turning to health, the mini-childhood module first asked respondents how their health was during childhood using 5-point Likert scale (excellent, very good, good, fair, or poor) of self-rated health. Around 45 percent of respondents stated that their health was excellent or very good, while only around 8 percent reported that their health was fair or poor during childhood. Similarly, 12 percent of respondents stated that they had missed school for one month of longer due to health reasons. The next set of questions asked respondents to specify whether they had any of the listed diseases during childhood (from when they were born to and including age 15). Overall, 80 percent of respondents stated that they had been diagnosed during childhood with an infectious disease (e.g. measles, rubella, chickenpox, mumps, diphtheria, scarlet fever). This high percentage is in accordance with what we had expected, as most individuals in this cohort would have been exposed to at least one of the major infectious diseases. 29 percent of respondents stated that they had at least one of the diseases in the list other than an infectious disease. Specific percentages for each condition were relatively low. The most common reported conditions during childhood were broken bones and fractures (9 percent), appendicitis (9 percent), severe headaches and migraines (5 percent), allergies other than asthma (4 percent) and chronic ear problems (3 percent). Asthma and other respiratory problems were reported by only 2 percent of the sample, and as were eyesight problems and emotional, nervous, or psychiatric problems. Finally, 95 percent of respondents stated that they had received a vaccination from the birth to age 15, which is consistent with what we had expected for these cohorts.

2.2.2 Cross-country variation in childhood assessments

Figure 2.3 shows distributions of each item by country. The results suggest that the mini-childhood module managed to capture the ample range of variation in early childhood circumstances across European countries. For example, the number of rooms during childhood varied across countries, ranging from around 2.5 in Estonia, Slovenia and Czech Republic to around 5 rooms in Switzerland, Luxembourg, Belgium, Denmark and the Netherlands. The fraction of individuals with few or no books at home ranged from 17 percent in the Czech Republic, Sweden and Denmark to 54 percent in Estonia and 58 percent in Italy. Interestingly, the French were more likely to report that their math and language abilities were lower than that of their peers, while there was less variation across other countries. Reporting being poor during childhood was relatively rare in Sweden (12 percent), Denmark (15 percent) and the Netherlands (15 percent), while it was very common in Italy (30 percent), Estonia (34 percent) and Slovenia (37 percent). The fraction of respondents stating that their health was fair or poor during childhood ranged from 6 percent in Israel and 7 percent in Denmark, to 23 percent in Estonia and 14 percent in Germany. These variations are difficult to interpret given reporting heterogeneity, e.g., Germans seem to be more likely to report being in poor health than the Danish, regardless of their underlying physical health.[4] The fraction of individuals reporting at least one major disease during childhood (excluding infectious diseases) ranged from 14 percent in Estonia and 17 percent in Italy, to 38 percent in Switzerland and Belgium. While it is difficult to interpret these variations, the results suggest that the questions capture a wide range of variation in childhood circumstances across European countries.

[4] The analysis of possible reporting bias is beyond the scope of this chapter but has been addressed with data from previous SHARE waves. See, for instance, Jürges (2007).

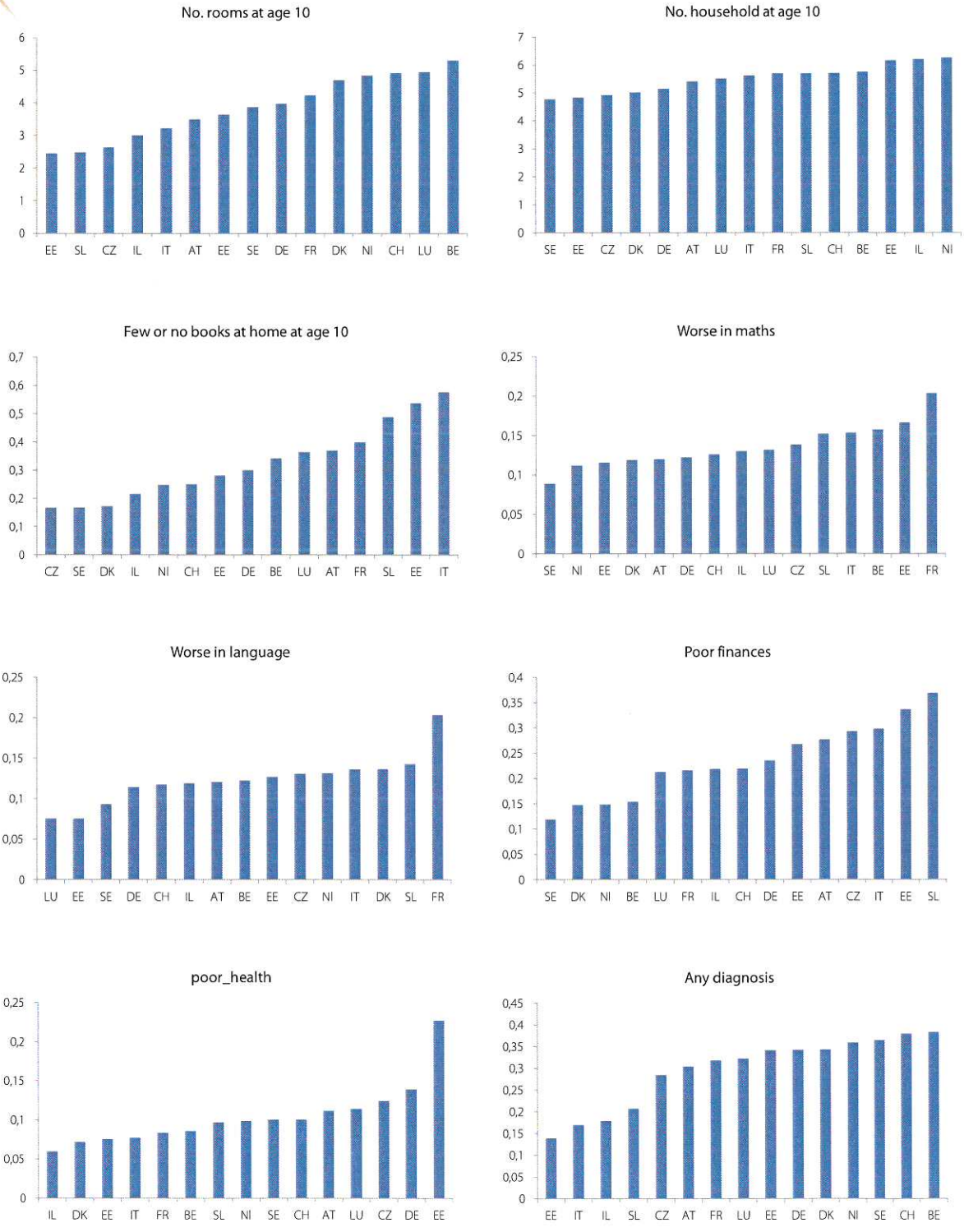

Figure 2.3: Childhood circumstances by country, SHARE Wave 5

2.2.3 Mini-childhood module and adult outcomes

A key motivation to assess early childhood conditions is to understand to what extent they relate the late-life circumstances. While there is no established gold standard, one way to examine whether the mini-childhood module worked well is to examine whether previously observed associations in country-specific studies (e.g., Smith, 2009a; Smith 2009b) are reproduced in the overall SHARE sample. Table 2.3 shows results from several OLS models that examine the relationship between early childhood and the following adult outcomes: years of schooling, adult fair/poor health, height and long-term illness. In addition to early childhood variables, models include country fixed effects (omitted from Table), age and sex. A mixed picture emerges for accommodation characteristics: for example, living in a private residence at age 10 is associated with more years of schooling, but also with higher probability of reporting fair of poor health in adulthood. More rooms in the home residence during childhood is associated with higher adult height, while more people in the household (conditional on the number of rooms) is associated with lower height. The number of books during childhood is weakly associated with adult outcomes. Self-perceived poor math ability is associated with less height, while poor language ability is associated with higher probability of poor health.

The variable that most consistently predicts adult outcomes is the financial position of the family while growing up: those who reported that their family was poor ended up with less years of schooling, had higher prevalence of poor health and were more likely to report a long-term illness in adult life. Childhood health was also strongly related with health in adult life, with respondents reporting excellent health in childhood having a much lower probability of reporting poor health in adulthood. Early childhood health is also associated with the risk of long-term illness, although this association is not statistically significant at conventional levels. Missing school during childhood for a month or more tends to imply a higher probability of long-term illness, but not with other outcomes. Surprisingly, having one or more medical diagnoses in childhood is associated with higher height, but also with higher risk of long-term illness in adult life. There was no clear relation between vaccinations during childhood and adult outcomes, although standard errors were large due to the small fraction of SHARE participants that had no vaccinations during childhood.

Table 2.3: OLS: Early childhood and adult social and health outcomes, SHARE Wave 5

	Years of schooling			Adult poor health			Height (cm)			Long-term illness		
	Estimate		SE	Estimate		SE	Estimate		SE	Estimate		SE
Age	-0.0248	**	0.0032	0.0142	**	0.0012	-0.0566	**	0.0172	0.0059	**	0.0013
Male	0.1938	**	0.0665	-0.0321		0.0251	10.5452	**	0.3558	0.0220		0.0267
Childhood accommodation (age 10)												
Living in private residence at age 10	0.2335	*	0.1161	0.1759	**	0.0438	0.5505		0.6209	0.0801		0.0466
Rooms when ten years old	-0.0158		0.0246	-0.0155		0.0093	0.6713	**	0.1309	0.0006		0.0098
Number of people living in household when ten	-0.0133		0.0131	0.0043		0.0049	-0.3731	**	0.0700	0.0066		0.0053
Number of books when ten (reference category: > 200 books)												
None or very few (0-10 books)	-0.2880		0.2387	0.0704		0.0900	-0.2627		1.2819	0.0382		0.0963
11-25 books	-0.1441		0.2394	0.0625		0.0902	-0.0362		1.2843	-0.0353		0.0965
26-100 books	-0.3567		0.2445	0.0883		0.0922	2.1682		1.3105	-0.0036		0.0985
101-200 books	0.1861		0.2997	0.0601		0.1130	3.3802	*	1.6012	-0.0109		0.1203
Childhood cognitive ability (age 10) (reference category: better/much better)												
Relative position to others math												
Worse/much worse	-0.1689		0.1086	-0.0115		0.0409	-1.5754	*	0.5807	-0.0308		0.0436
The same	0.0757		0.0942	0.0167		0.0355	0.1668		0.5034	0.0317		0.0378
Relative position to others language												
Worse/much worse	-0.1814		0.1208	0.1541	**	0.0455	-0.5339		0.6450	0.0889		0.0485
The same	0.0034		0.1009	0.0509		0.0380	0.3274		0.5376	-0.0294		0.0404

Table 2.3: OLS: Early childhood and adult social and health outcomes, SHARE Wave 5 (continued)

	Years of schooling			Adult poor health			Height (cm)			Long-term illness		
	Estimate		SE	Estimate		SE	Estimate		SE	Estimate		SE
Age	-0.0248	**	0.0032	0.0142	**	0.0012	-0.0566	**	0.0172	0.0059	**	0.0013
Male	0.1938	**	0.0665	-0.0321		0.0251	10.5452	**	0.3558	0.0220		0.0267
Childhood accommodation (age 10)												
Living in private residence at age 10	0.2335	*	0.1161	0.1759	**	0.0438	0.5505		0.6209	0.0801		0.0466
Rooms when ten years old	-0.0158		0.0246	-0.0155		0.0093	0.6713	**	0.1309	0.0006		0.0098
Number of people living in household when ten	-0.0133		0.0131	0.0043		0.0049	-0.3731	**	0.0700	0.0066		0.0053
Number of books when ten (reference category: > 200 books)												
None or very few (0-10 books)	-0.2880		0.2387	0.0704		0.0900	-0.2627		1.2819	0.0382		0.0963
11-25 books	-0.1441		0.2394	0.0625		0.0902	-0.0362		1.2843	-0.0353		0.0965
26-100 books	-0.3567		0.2445	0.0883		0.0922	2.1682		1.3105	-0.0036		0.0985
101-200 books	0.1861		0.2997	0.0601		0.1130	3.3802	*	1.6012	-0.0109		0.1203
Childhood cognitive ability (age 10) (reference category: better/much better)												
Relative position to others math												
Worse/much worse	-0.1689		0.1086	-0.0115		0.0409	-1.5754	*	0.5807	-0.0308		0.0436
The same	0.0757		0.0942	0.0167		0.0355	0.1668		0.5034	0.0317		0.0378
Relative position to others language												
Worse/much worse	-0.1814		0.1208	0.1541	**	0.0455	-0.5339		0.6450	0.0889		0.0485
The same	0.0034		0.1009	0.0509		0.0380	0.3274		0.5376	-0.0294		0.0404
Childhood SES (age 0-15)												
Financial position family (reference category: pretty well off financially)												
Poor	-0.4951	**	0.1762									
About average	-0.4443	**	0.1674									
Childhood health (age 0-15) (reference category: poor)												
Childhood self-rated health status (1-5)												
Excellent	-0.4120		0.2174	-0.2369	**	0.0819	1.0215		1.1578	-0.1170		0.0870
Very good	-0.3549		0.2148	-0.1216		0.0810	1.5471		1.1438	-0.1514		0.0859
Good	-0.3179		0.2116	-0.1118		0.0798	1.9790		1.1270	-0.1659	*	0.0847
Fair	-0.1191		0.2427	-0.0363		0.0915	3.9618	**	1.2931	-0.0743		0.0972
Missed school for 1 month+	-0.1289		0.1234	-0.0578		0.0465	-0.0329		0.6579	0.1250	*	0.0494
> 1 medical diagnosis (no infections)	-0.1587		0.0920	0.0115		0.0347	1.3180	**	0.4909	0.1209	*	0.0369
Vaccinations during childhood	0.1516		0.1210	-0.0748		0.0456	1.2021		0.6506	0.0027		0.0489

2.2.4 Conclusion

This chapter has validated the selection of items included in the mini-childhood module introduced in SHARE Wave 5 and provided an overview of its reach and potential to capture early life circumstance and illustrate their importance for understanding late-life outcomes. In particular, the new item on family financial circumstances while growing up performs particularly well as a measure of childhood socioeconomic status and strongly predicts adult health and social outcomes. Likewise, early childhood health strongly predicts adult health. Other items show similar associations as those observed with the original SHARELIFE sample and documented in Börsch-Supan, Brandt, Hank and M. Schröder, Eds. (2011). The mini-childhood module items capture a wide range of variation across countries in living and health circumstances across countries. An important area of future research is the extent to which early childhood measures are susceptible to reporting heterogeneity, in the same way that this question has been explored for adult measures, particularly for health. In conclusion, the mini-childhood module will provide for the first time researchers with a unique opportunity to examine how early childhood circumstance shape the life of older adults on the full range of SHARE countries in Europe.

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