

2 Methodology

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Methodology

Key Findings

- A response rate of 81% with 5,101 completed self-interviews was achieved in the 10th year of TILDA.
- A response rate of 57% was achieved for proxy interviews (n=124), i.e. where a close relative or friend completes the interview on behalf of a participant unable to do so due to a physical or cognitive impairment. A further 172 End-of-Life interviews were completed for participants who had died.
- A total of 4,410 self-completion questionnaires were returned, a response rate of 86%.

2.1 Introduction

At Wave 5, interviews were sought from 6,813 participants. Details of the sampling methods used in Waves 1-4 of TILDA have been reported previously. (1,2,3,4)

Collection of participant data involved two components: a computer-assisted personal interview (CAPI) and a self-completion questionnaire (SCQ). The CAPI is administered by a trained social interviewer in the participant's own home. The participant answers questions on their health, economic, social and family circumstances. The vast majority (98%) of CAPI interviews were conducted as self-interviews, where a participant is capable of answering some or most questions.

In some cases, a participant may be unable to take part in the interview due to a physical or cognitive impairment; in these cases, a proxy respondent, such as a close relative or friend, is sought to complete the interview on behalf of the original participant. Whether a participant needs a proxy interview is evaluated in each wave because individual circumstances might change over the intervening time. Proxy interviews account for 2% of all the CAPI interviews in Wave 5.

Following completion of the CAPI, participants are provided with the SCQ to be completed and a pre-paid envelope in which to return it to TILDA. The SCQ includes more sensitive questions on topics such as quality of life, interpersonal relationships, ageing perceptions and alcohol consumption. Proxy interviewees are invited to complete the CAPI but not the SCQ. Topics covered in the CAPI and SCQ are listed in Table 2.1.

From Wave 2, each wave of data collection has also included End-of-Life (EOL) interviews. EOL interviews are sought with a spouse, relative or friend in cases where a participant has passed away. Questions are asked which cover the health, social and financial circumstances of the participant in the year before they died.

Table 2.1. Questions and measures included in CAPI and SCQ at Wave 5

Domain	Measures
Demographics	Marital status; marriage history; education; migration history; childhood.
Social circumstances	Transfers to/from children/parents/others; help with (instrumental) activities of daily living; social connectedness; social networks; volunteering; caring; social participation; religion; relationship quality; driving and travel.
Health and healthcare	Physical (self-rated health; limiting long-standing illness; sensory function; cardiovascular and non-cardiovascular disease; falls; fear of falling; fractures; pain; oral health; health screening); cognitive (self-rated memory; word-list learning; verbal fluency; prospective memory); psychological (depressive symptoms; anxiety; resilience; life satisfaction; loneliness; worry; quality of life; perceived stress); behavioural (smoking; physical activity; sleep; alcohol; dietary intake); medications; healthcare utilisation; health insurance.
Employment, retirement & assets, lifelong learning	Employment situation; job history; planning for retirement; sources of income; home ownership; other assets; expectations; health literacy.

2.2 Computer-assisted personal interview response rates

Of the 6,813 eligible participants before Wave 5, 5,397 completed a form of interview at Wave 5. There were three new participants identified during fieldwork who did not previously take part but are related to an original participant and live in the same household.

The vast majority of CAPI participants complete an interview on their own ($n=5,101$), with lower numbers completing proxy ($n=124$) and EOL ($n=172$) interviews. The response rate of Wave 5 is calculated as the number of completed self-interviews in Wave 5, relative to the total number of potential interviews. Potential interviews only include the eligible participants before Wave 5, excluding participants who permanently withdrew from the study, needed a proxy interview, died, or moved outside the target area, before Wave 5.

Table 2.2 presents the Wave 5 CAPI response rates (and counts) by age group and gender. The total CAPI response rate achieved in the 10th year of TILDA is 81%. The proxy interview response rate was calculated as the number of proxy interviews completed relative to the total number of participants identified as eligible for proxy interview throughout fieldwork. A total of 124 proxy interviews were completed by a close relative or

friend on behalf of the original participant, achieving a response rate of 57%. The average age of proxy respondents is 84 years.

Table 2.2. Wave 5 self-interview response rates (% , n), by age and sex

	Male % (n)	Female % (n)	Total % (n)
<58 years	100 (22)	84 (187)	85 (209)
58-64 years	83 (663)	83 (841)	83 (1504)
65-74 years	81 (873)	82 (1091)	81 (1964)
≥75 years	80 (675)	77 (749)	78 (1424)
Total	81 (2233)	81 (2868)	81 (5101)

2.3 Reasons for attrition at Wave 5

The reasons for non-participation attrition at Wave 5 are listed in Table 2.3. More than half (56%) of cases of non-participation are refusals (e.g. due to illness or personal reasons, or time constraints during the period of Wave 5 data collection). Nonetheless, participants who decline to participate in a certain wave do not necessarily withdraw from the study permanently. They remain eligible for follow-up at future waves.

Similar to self-interviews, 73% of all cases of non-participation for proxy interviews are refusals. Another 16% of cases of non-participation are due to there being no permission to seek a proxy or a proxy's not being identified; this means the participant did not give consent or contact details for a proxy interview in any of the previous waves.

Table 2.3. Reasons for sample attrition

Reason	Potential Participants		Potential proxy Respondents	
	%	n	%	n
Refusal	56	669	73	68
Withdrawn	29	343	-	-
Unable to contact participant	14	160	11	10
Moved Outside ROI/NI	1	13	-	-
No permission to seek proxy, proxy not identified, or other	-	-	16	15
Total	100	1185	100	93

2.4 Self-completion questionnaire response rates

Table 2.4 presents SCQ response rates at Wave 5 by age and gender. The overall SCQ response rate is 86% (n=4,410, mean age = 69 years). The highest response rate (90%) is among the 65-74 years age group.

Table 2.4. Wave 5 SCQ response rates (% , n) by age and sex

	Male % (n)	Female % (n)	Total % (n)
<58 years	82 (18)	86 (161)	86 (179)
58-64 years	82 (544)	87 (728)	85 (1272)
65-74 years	89 (774)	91 (993)	90 (1767)
≥75 years	84 (569)	83 (623)	84 (1192)
Total	85 (1905)	87 (2505)	86 (4410)

2.5 Dataset

All of the results throughout this report are generated from the TILDA datasets: CAPI v5.6.1 and AuditTracker_W1-W5 v2019.10.03. The CAPI dataset includes completed interviews from 5,225 participants (5,016 aged 58 years and over) who did a self-interview or proxy interview at Wave 5. The CAPI dataset also contains SCQ results of 4,410 participants (4,231 aged 58 years and over). The AuditTracker is an internal dataset that tracks participation of all participants in each component of the study at each wave, in addition to reasons for non-response and attrition. An anonymised dataset will shortly be archived at the Irish Social Science Data Archive (ISSDA) at University College Dublin (<https://www.ucd.ie/issda/data/tilda/>).

2.6 Analytical methods employed in this report

Statistical methods used to calculate the estimates presented in this report are described below. These methods aim to correct for potential biases in survey data estimates, in addition to determining correctly the uncertainty surrounding those estimates.

2.6.1 Point estimates and confidence intervals

The majority of estimates in this report are to reflect the percentage of adults in Ireland that fall within specific groups with different analysis criteria. Means or medians of specific continuous quantities are reported where appropriate.

The TILDA cohort is representative of adults aged over 50 in Ireland. Each member of the study cohort thus corresponds with a given number of individuals in the Irish population aged 50 and older. The initial cohort in Wave 1 was recruited only from community-dwelling adults; however, participants recruited in Wave 1 who later moved to an institutional setting are followed up at all subsequent waves where possible.

Due to the random nature of the population sampling process, there is some inherent uncertainty in the derived estimates. To account for this, most estimates in this report are presented with 95% confidence intervals (CI). Formally, the 95% CI indicates that with repeated sampling, 95% of the CIs calculated would contain the true population parameter. The 95% CI can therefore be interpreted as the range within which there is a 95% chance that the true population parameter will lie.

2.6.2 Weighting

Although TILDA is nationally representative of the older community-dwelling population in Ireland, patterns of response to each component of the study (CAPI, SCQ) vary across certain subgroups of the sample. Participation in later waves of the study is also influenced by levels of participation at earlier waves and by sample attrition.

To account for these systematic differences in responses and to ensure that the estimates derived from the sample remain representative of the target population, a number of weights are calculated and applied to different analyses. Weighting ensures that, for the estimates calculated, subgroups within the sample are proportionate to the number of that subgroup in the population of Ireland.

In practice, the weights reflect the reciprocal of the probability of a participant being included in the study, based on characteristics such as age, gender, education level, marital status and the participant's membership of the target population. Separate longitudinal CAPI weights were used for different analyses in each Chapter, depending on the participants included within each analysis. Longitudinal weights (for CAPI or SCQ) were calculated by multiplying the base CAPI weight by the reciprocal of the probability that a participant completed Waves 2, 3, 4 and 5 (following participation at Wave 1). The probability was calculated using a multivariate logistic regression model with the following baseline predictors as used in Wave 4: Age, sex, educational attainment, marital status, employment status and factors related to physical, mental and cognitive health. (5) Longitudinal versions of these weights that included attrition between Waves 1 and 5 (i.e., where a participant skipped participation in Wave 2, Wave 3 or Wave 4) were also

calculated. Finally, two sets of these longitudinal weights were also calculated, separated according to self-interviews only (i.e., proxy interviews were treated as attrition), or as self and proxy interviews (i.e., proxy interviews treated as participation). This accommodated the differing inclusion of proxy respondents in analyses throughout the report, depending upon the data analysed.

2.6.3 Software

All analyses in this report were conducted using STATA 12.0, 14.2 or 15.1.

References

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