CENTRE FOR LONGITUDINAL STUDIES

A Guide to Social Isolation Variables in the British Cohort Studies

Centre for Longitudinal Studies

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Overview of the project

This project was funded by the Economic and Social Research Council (ESRC) as part of their Secondary Data Analysis Initiative. Over three years, we aimed to develop a conceptual and empirical understanding of social isolation across the lifecourse and to document the social isolation data collected across five successive British cohort studies. We predominantly focused on objective indicators of social isolation as opposed to subjective assessments and loneliness. Additionally, we aimed to understand the inter-relationship between social isolation and loneliness and the association with mental health at different life stages. For all project outputs, refer to the 'Relevant publications and outputs' section at the end of this guide.

Summary of the guide

In this guide, we present a multi-context, multi-domain framework of social isolation and describe the application of the framework to the British cohort studies. We summarise our harmonisation process and available variables at different life stages, offer practical considerations and potential uses of the data. By sharing our process and findings, this guide aims to provide a resource for future researchers interested in studying social isolation in the United Kingdom (UK) and its constituent nations.

What is social isolation and why focus on it?

Social isolation is indicated by quantifiable, situational factors across a range of relational contexts such as living alone or infrequent contact with friends, family and people in the community (Cornwell & Waite, 2009; Huisman & van Tilburg, 2021). Although moderately related to the subjective assessment of the meaning, value and function of social relationships and loneliness, social isolation is distinct and independently predicts lower wellbeing and mortality (Golden et al., 2009; Coyle & Dugan, 2012; Steptoe et al., 2013; Holt-Lunstad et al., 2015). Prior to this project, few studies had focused primarily on social isolation (Loades et al., 2020; Holt-Lunstad & Steptoe, 2022). In doing so, we shift the focus towards structural factors contributing to a lack of social connectedness with the potential to identify areas that are modifiable through targeted policy and intervention. Our research highlights that efforts to reduce isolation and its negative mental health impacts must recognise the complexity of experience across contexts and populations (Mansfield et al., 2024).

Social isolation and a lifecourse approach

In order to comprehensively study social isolation, researchers must capture isolation across a range of relational contexts, at different life stages and for different populations (Umberson & Donnelly, 2022). However, until now, there has been limited evidence on social isolation using data from longitudinal, population-based studies such as the British cohort studies. By following the same individuals over time, these studies offer a unique lifecourse approach, providing insights on isolation trajectories and key life stages for intervention. Making use of multiple successive British cohort studies also enables cross-generation comparisons to be made, giving a better understanding of how social isolation has changed over time.

Social isolation framework

To capture all relevant social isolation experiences across the lifecourse and cohorts, we first developed a multi-context, multi-domain framework. We identified relational contexts within which social isolation can occur e.g., household, community (see Figure 1.) denoted by different colours. The relational contexts mapped onto the microsystem, presented in Bronfenbrenner's Ecological System Theory (Bronfenbrenner, 1992), focusing on individuals' social conditions within their immediate environment. Informed by Cornwell & Waite's (2009) definition of social disconnectedness, we defined isolation as the situational factors that cover an individual's social network, infrequent social interactions, and a lack of participation in social activities and groups. Various domains and objective indicators of social isolation were identified through reviewing pre-existing conceptualisations and measurement in the field (see Mansfield et al., 2024 for more detail).

Overview of the data

Medical Research Council National Survey of Health and Development (NSHD, 1946)

The NSHD was the first national-level birth cohort study, originally developed to explore the national distribution of maternity service use and associated outcomes for mothers and children (NSHD cohort profile).The initial sample consisted of 13,687 babies born in one week in March 1946 across England, Scotland and Wales. A socially stratified sub-sample of 5,362 cohort members was selected for follow-up and have since been surveyed over 20 times across the lifecourse.

Cohort website: https://nshd.mrc.ac.uk/

National Child Development Study (NCDS, 1958)

The second oldest British birth cohort study, NCDS, was developed as a perinatal mortality survey to inform improvements to maternity services (NCDS cohort profile). The original sample consisted of 17,415 babies born across England, Scotland and Wales in one week in 1958. An additional 800 immigrant cohort members born in March 1958 were added to the sample during the childhood sweeps. To date, there have been over 10 follow up surveys.

CLS cohort website: https://cls.ucl.ac.uk/cls-studies/1958-national-child-development-study/

1970 British Cohort Study (BCS70)

BCS70 is a multi-disciplinary birth cohort that originally included 17,000 babies born in one week across England, Scotland and Wales in 1970 (BCS cohort profile). At ages 5 (n=68), 10 (n=270), 16 (n=57) and 26 (n=8) additional participants with immigrant status were included in the study. Since birth, cohort members have been followed up 10 times.

CLS cohort website: https://cls.ucl.ac.uk/cls-studies/1970-british-cohort-study/

Next Steps (NS, born 1989–90)

Next Steps, previously known as the Longitudinal Study of Young People in England, is a cohort study following the lives of individuals born within one year (1989-1990) in England (NS cohort profile). The initial sample included 15,770 cohort members recruited in 2004 and

first surveyed at age 14. Annual surveys were conducted until the age of 20 and then again at age 25 and, most recently, at age 32.

CLS cohort website: https://cls.ucl.ac.uk/cls-studies/next-steps/

Millennium Cohort Study (MCS, born 2000–02)

MCS is the youngest of the British cohorts and, like Next Steps, is a multidisciplinary, longitudinal study following the lives of approximately 19,000 people born between 2000 and 2002 across England, Scotland, Wales and Northern Ireland (MCS cohort profile). To ensure sample representativeness, children living in disadvantaged areas and ethnic minorities were over-sampled. Study members have now been followed up eight times since birth.

CLS cohort profile: https://cls.ucl.ac.uk/cls-studies/millennium-cohort-study/

This project included data from age 10 as per the World Health Organisation (WHO) definition of adolescence (ages 10-19). For all cohort studies, the first inclusion of self-reported questionnaires was during this life stage. Only data collected prior to the COVID-19 pandemic is summarised in this guide. All data are available to researchers via the UK Data Service: https://ukdataservice.ac.uk/ and https://nshd.mrc.ac.uk/.

Figure 1. Multi-context, multi-domain framework of social isolation: indicators of social isolation within each relational context

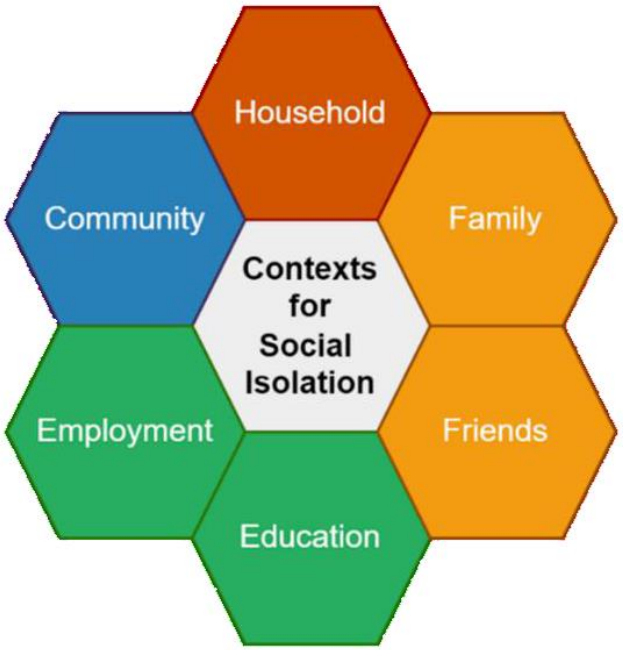
Network size Living alone Household size **Network composition** Indicators of household members e.g., parent, partner, child, non-relative)	**Network size** Size of family network outside of household **Network composition** Composition of family network outside of household **Frequency of contact** Frequency of contact with family outside of household e.g. seeing a parent that does not live with you	**Network size** Partnership status (cohabiting vs. non-cohabiting) Size of friend network outside of household **Network composition** Composition of partners/friends outside of household e.g., similarity of friends in terms of age, ethnicity, religion **Frequency of contact** Frequency of contact with non-cohabiting partner and/or friends outside of household
Network size In education vs. not in education, number of education networks **Network composition** Composition of education networks **Frequency of contact** Frequency of attendance e.g., full vs. part time education	**Network size** In employment vs. not in employment, number of jobs **Network composition** Composition of employment networks **Frequency of contact** Frequency of attendance e.g., full vs. part time employment	**Network size** Size of community network e.g., number of memberships to clubs/organisations, volunteering status, number of neighbours known **Network composition** Composition of community networks **Frequency of contact** Frequency of contact with community networks and social activity in the community e.g., religious activity

The harmonisation process

This multi-context, multi-domain framework of social isolation was applied to the data collected in each of the five British cohort studies. As previously noted, we focused on compiling variables that related to objective indicators of social isolation, as opposed to subjective assessments and loneliness. Each variable was coded based on which relational context it referred to (e.g., household, friends, employment, or community), and the domain of social isolation measured (e.g., network size or frequency of contact). Where common variables and derivable data were available across timepoints and cohorts, comparable social isolation indicators were generated through a process of harmonisation. This involved considering both the phrasing of the question and the response options and identifying common features across time points and cohorts. Items were then recoded consistently to produce common indicators of social isolation.

It must be noted that the harmonisation process was for the purposes of our wider project which aimed to generate the lifecourse trajectories and cross-generational trends in social isolation and explore the association between social isolation and mental health at different life stages and over time in Great Britian. The project therefore had to prioritise breadth of information across the lifecourse and cohorts, as opposed to depth of measurement at any one specific timepoint. This is a common compromise of the harmonisation process but one that must be acknowledged. Of course, for some timepoints and cohorts, data on a particular context and domain was not always available. A reduced set of relational contexts and social isolation domains is presented in Figure 2. The figure indicates where enough data was present and measured consistently enough to model lifecourse trajectories across the five cohorts (i.e., at least three sweeps of data available).

Figure 2. Indicators of social isolation available across sweeps and cohorts within a reduced set of relational contexts



Network size
Living alone **
Household size **

Network composition
Indicators of household members e.g., parent, partner, child, non-relative)

Network size
No partner **
No friends

Frequency of contact
Less than monthly contact with family and friends outside of the household **

Network size
In education
In employment
Both
Neither **

Network size
No membership to clubs/organisations **
No volunteering **

Frequency of contact
Less than monthly
Religious activity **
Social activity e.g., going to the pub **
Sporting activity **

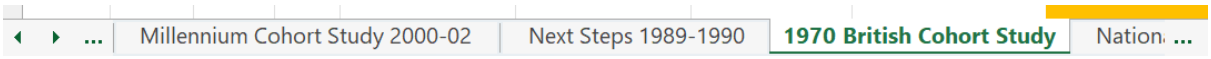
Note: ** indicates domains with at least three sweeps of data and consistent measurement to model lifecourse trajectories across cohorts

Overview of available social isolation variables

The availability of relevant variables is mapped out in Table 1. on page 15 enabling researchers to assess the coverage of different social isolation constructs across the lifecourse and cohorts.

Researchers can also access an Excel file titled ‘Social Isolation Variable Guide by Cohort.xlsx’ on the Open Science Framework (OSF) which was our first attempt at compiling variables relevant to social isolation across the five cohort studies.

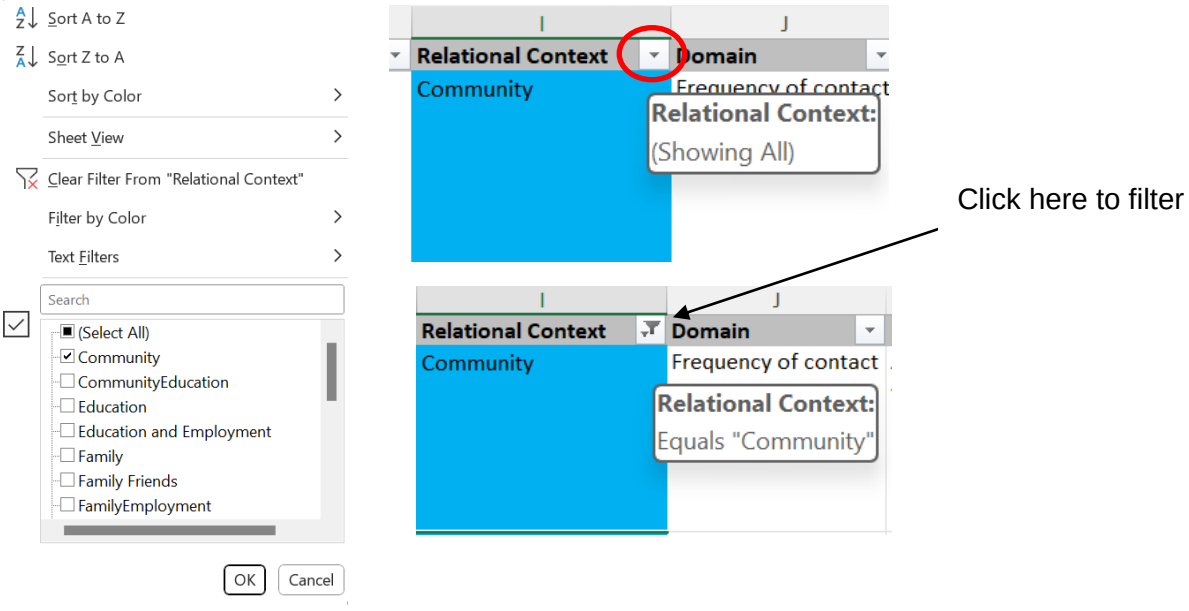
As such, the variables are organised by cohort with a tab for each.



Each tab includes columns relating to which data collection sweep the variable is from, the age of the cohort member, which dataset the variable can be found in, the respondent, variable code, information on whether the variable should be classed as an objective indicator of social isolation as opposed to measuring quality or function of social relationships, which relational context is captured by the variable e.g., household, friends, employment or community, which domain of social isolation is captured by the variable e.g., network size, frequency of contact, composition, a description of the type of variable within the survey e.g., 'You and your friends', the item itself and the response options.

F	G	H	I	J	K	L	M
Respondent	**Variable Code**	**Objective Indicator**	**Relational Context**	**Domain**	**Description**	**Item**	**Responses**
Cohort member	ECQ03X00	Yes	Community	Frequency of contact	About what you do when not at school	How often do you play sports or active games inside or outside, not at school?	1 Most days 2 At least once a week 3 At least once a month 4 Less often than once a month 5 Never -8 No answer

Researchers can use the filter function to explore social isolation variables relating to specific relational contexts and domains e.g., only community. Relational contexts are colour coded in line with our framework to help aid the filtering process.

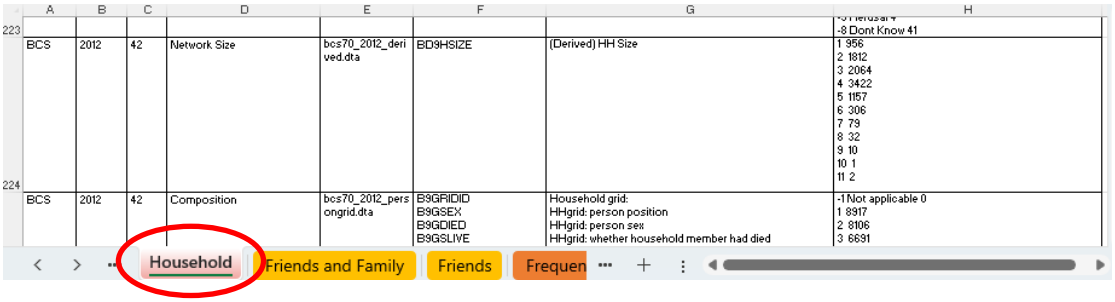


For each context, there are specific considerations to be made when identifying variables depending on your research question. We selected variables for our project based on the availability across the lifecourse and cohorts. Below are examples of different social isolation indicators available and some data observations that arose through our process of harmonisation.

Household

For some sweeps and cohorts, variables are available to indicate whether a study member lives alone (e.g., NCDS age 23 'n5031 - Whether lives alone or with others' in 'ncds4.dta'). However, more commonly, a derived household size variable is included at each sweep across cohorts (e.g., BCS age 34 'bd7numhh - (Derived) Total number of people in household' in 'bcs_2004_followup.dta'). There are some sweeps where this derived variable is not available (e.g., NS age 20), or the variable has a large proportion of missing data (>90%) (e.g., NS age 18). To ensure completeness of data for mapping lifecourse trajectories of household size and living alone, we generated household size variables using the household grids. This will not be necessary for most researchers, but example code is available on OSF.

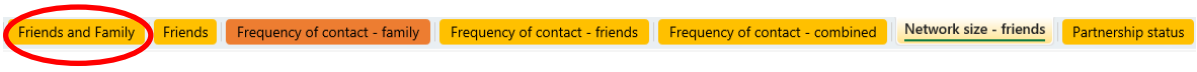
For a full list of household variables available across sweeps and cohorts see the red 'Household' tab in the Excel sheet titled 'Social Isolation Variable Guide by Context' on OSF.



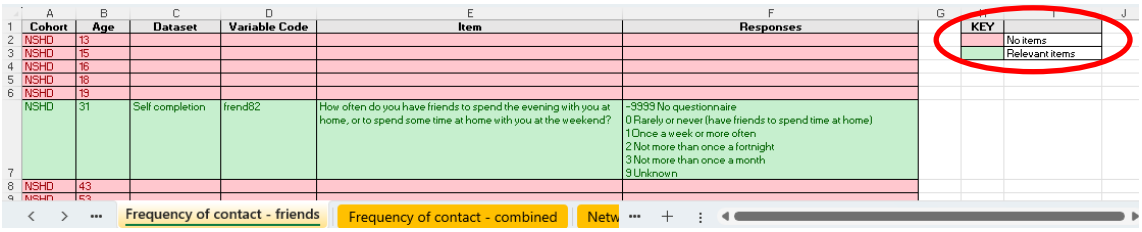
For some social isolation researchers, it might be important to understand who a study member is living with and to generate household composition variables. Household grids include this information, usually in the form of variables labelled 'Relationship to cohort member' (e.g., MCS age 11 'ECREL000 - Persons relationship to CM' in 'mcs5_hhgrid.dta').

Friends and family outside of the household

For a full list of variables relating to friends and family outside of the household across sweeps and cohorts see all of the orange and yellow tabs in the Excel sheet titled 'Social Isolation Variable Guide by Context' on OSF.



There are also tabs which summarise specific variables relating to frequency of contact with friends and family and list the available data by cohort and age using a colour coded key.



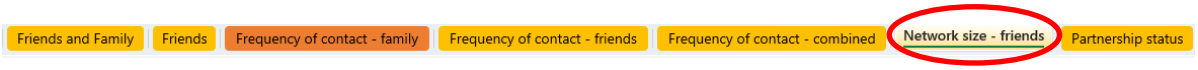
Cohort	Age	Dataset	Variable Code	Item	Responses
NSHD	13				
NSHD	15				
NSHD	16				
NSHD	18				
NSHD	19				
NSHD	31	Self completion	frend82	How often do you have friends to spend the evening with you at home, or to spend some time at home with you at the weekend?	-9999 No questionnaire 0 Rarely or never (have friends to spend time at home) 1 Once a week or more often 2 Not more than once a fortnight 3 Not more than once a month 9 Unknown
NSHD	43				

KEY: No items; Relevant items

Frequency of contact - friends | Frequency of contact - combined | Netw

In a few cases, variables are available on the number of friends a cohort member has (e.g., NS age 19 – 'W6FriendNumYP - How many close friends do you have?' in 'wave_six_lsype_young_person_2020.dta'). There are also some instances where it is possible to generate indicators for the cohort member having no friends by using the response options for questions relating to time spent with friends (e.g., BCS age 46 – 'B10FREMT - Frequency of meeting friends' response 'N/A - does not have any friends' in 'bcs_age46_main.dta').

See the tab titled 'Network size – friends' for available variables on the number of friends a cohort member has.

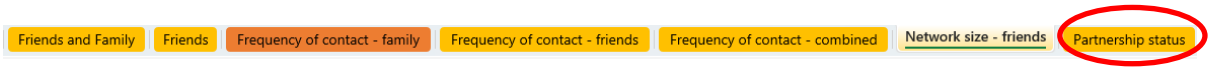


Sometimes variables assessing cohort members' frequency of contact with friends and family are asked separately (e.g., NCDS age 44 – 'numpals - How often do you have regular contact with friends or acquaintances outside your household?' and 'seerels - How often do you have regular contact with relatives outside your household?' in 'ncds42-4_biomedical_eul.dta') and sometimes in combination (e.g., NSHD age 64 – 'frndc09 - Thinking of all your relatives or friends, how often do you regularly visit or are visited by these people?').

In a few cases, a subset of the sample (e.g., mothers) were asked to complete items relating to visiting friends and relatives (e.g., NCDS age 33 – 'n516020 - Family go out to see relatives/friends' in 'ncds5mc.dta'). We do not include these in Table 1. Similarly, there are some sweeps that include specific questions relating to caring responsibilities and therefore frequency of contact with relatives, but these were deemed too specific for the purposes of the project. Due to a lack of data available at age 46 in NCDS relating to frequency of contact with friends and relatives, we include variables available in the age 44 biomedical sweep. These are the only variables that we summarise for the biomedical sweep in Table 1. given it was designed to predominantly focus on biomedical risk factors.

There are period effects influencing the way in which cohort members are asked about their partnership status across cohorts. For example, in NSHD, the oldest cohort study, items predominantly refer to marital status with no information on non-residential romantic relationships. Some sweeps also had a large proportion of missing data (e.g., NSHD age 31). There are also some sweeps in the newer cohorts for which only marital status is available (e.g., BCS age 43). In the younger cohorts, for some of the adolescent sweeps, cohort members are asked whether they have boyfriends/girlfriends. There are some sweeps for which this information is only available indirectly i.e., through giving a particular response to another question (e.g., NS age 14 – 'W1whothesYP - Sex of friends YP spends time with' response 'Current boyfriends/girlfriends' in 'wave_one_lsype_young_person_2020.dta').

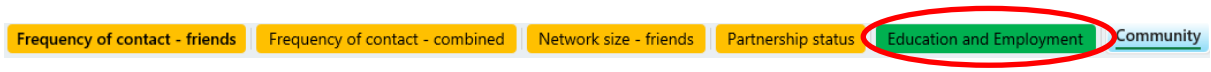
For all variables relating to partnership status see the ‘Partnership status’ tab in the Excel sheet titled ‘Social Isolation Variable Guide by Context’ on OSF.



Education and employment

For the majority of sweeps across cohorts, study members’ education and employment status is indicated by a derived ‘main economic activity’ variable (e.g., BCS age 34 – ‘bd7ecact - (Derived) Cohort Member's main activity’ in ‘bcs_2004_followup.dta’). Response options enable you to understand whether a cohort member is in employment, education or neither. For the purposes of understanding the extent to which an individual is socially isolated, a variable can be created to indicate whether a cohort member is neither in education nor employment. In our project, we mapped social isolation trajectories from age 10 and therefore, in the adolescent years, we generated variables based on the age of compulsory education for each specific cohort, to indicate that a cohort member was in education. After the age of compulsory education, we then used variables relating to the study members’ main economic activity. In Table 1. we therefore show that education status is available in adolescence based on the age of compulsory education.

For a full list of variables relating to education and employment status across sweeps and cohorts see the green ‘Education and Employment’ tab in the Excel sheet titled ‘Social Isolation Variable Guide by Context’ on OSF.



Community

For the purposes of mapping lifecourse trajectories of social isolation in the community, we organised social activities into five themes for which indicators were generated: membership to any clubs or organisations, volunteer status, at least monthly religious activities, general social activities (e.g., going to the pub or the cinema), and sporting activities. Often, there was not information across all five of the community themes at any one sweep. However, in cases where various aspects of community engagement were captured, researchers could consider creating an index. For some sweeps across cohorts, only one specific question was asked relating to social activity in the community such as going to the cinema or the library (e.g., MCS age 11 – ‘EPLIBR00 - how often has [^Cohort child's name] been to a library’ in ‘mcs5_parent_cm_interview.dta’). In these instances, we did not feel it was a sufficient measure of social activity, and this is reflected in Table 1.

For a full list of variables relating to community engagement across sweeps and cohorts see the blue ‘Community’ tab in the Excel sheet titled ‘Social Isolation Variable Guide by Context’ on OSF.

Supporting documentation

In order to help other researchers interested in studying social isolation using the British cohort studies, we have created an OSF webpage to accompany this guide which can be accessed here. The OSF webpage includes:

- Excel sheet used to initially compile potentially relevant social isolation variables across the five cohorts – titled 'Social Isolation Variable Guide by Cohort.xlsx'
- Excel sheet used to organise variables by relational context – titled 'Social Isolation Variable Guide by Context.xlsx'
- Example Stata code for generating social isolation indicators for each of the five cohorts – titled '[cohort name] social isolation example code.do'

*Please note the above documents were produced for the purposes of our wider project and therefore only act as guides and examples.

Potential for future research

The initial aim of this project was to investigate the lifecourse trajectories and cross-generational trends in social isolation across five successive British cohort studies. Using data summarised in this guide, we have also published articles relating to the inter-relationships between social isolation and loneliness and their correlates among older British adults before and during the COVID-19 lockdown, and the association between social isolation and mental health in mid-life. There is the potential for many more studies using social isolation data from the British cohort studies. Here are just a few examples of questions that could potentially be answered in future research:

- To what extent are there inequalities (e.g., socio-economic) in social isolation across the lifecourse and between generations?
- Does being isolated in one context result in compensatory social connections in another?
- For the younger cohorts (Next Steps and MCS), what is the association between social isolation and loneliness on wellbeing (i.e., experiencing both, either or neither) during early adulthood?
- How do people's social connections change after major life events such as having children, divorce and bereavement?

There are also opportunities to focus on specific social isolation domains such as a more detailed investigation of community engagement or to understand the association between living alone and mental health across the lifecourse and between generations.

Relevant publications and outputs

Mansfield, R., Henderson, M., Richards, M., Ploubidis, G., & Patalay, P. (2023). Lifecourse trajectories and cross-generational trends in social isolation: findings from five successive British birth cohort studies. *Advances in Lifecourse Research, 60*, 100613. https://doi.org/10.1016/j.alcr.2024.100613

Mansfield, R., Di Gessa, G., Patel, K., McElroy, E., Wels, J., Henderson, M., ... & Patalay, P. (2023). Examining the inter-relationships between social isolation and loneliness and their correlates among older British adults before and during the COVID-19 lockdown: evidence from four British longitudinal studies. *Innovations in Aging*, igad126 https://doi.org/10.1093/geroni/igad126

Mansfield, R., Richards, M., Ploubidis, G., Henderson, M., & Patalay, P. (2024). Social isolation in mid-life: associations with psychological distress, life satisfaction and self-rated health in two successive British birth cohorts. *Medrxiv.* https://doi.org/10.1101/2024.08.05.24311494

For all relevant publications and outputs, visit the CLS and OSF project webpages:

CLS: https://cls.ucl.ac.uk/cls_research/social-isolation-loneliness-and-wellbeing-across-the-life-course-and-between-five-british-birth-cohorts/

OSF: https://osf.io/rabk8/

Table 1. Overview of available variables relating to social isolation indicators by age and cohort

Cohort	**National Survey of Health and Development (NSHD, 1946)**																													
Age at sweep	10	11	13	14	15	16	17	18	19	20	21	22	23	24	25	26	30	31	33	34	36	38	42	43	44	46	50	53	55	64	70
Household																															
Household size		✓			✓											✓					✓			✓				✓		✓	✓
Living alone		✓			✓											✓					✓			✓				✓		✓	✓
Family and Friends																															
No partner						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					✓			✓				✓		✓	✓
No friends			✓		✓																										
No regular contact with family and friends outside household																					✓			✓				✓		✓	✓
Education and Employment																															
Neither in education nor employment		✓	✓		✓	✓	✓	✓		✓		✓			✓	✓		✓			✓			✓				✓		✓	✓
Community																															
No membership to clubs/organisations/groups		✓	✓		✓	✓										✓					✓			✓						✓	✓
No volunteering																					✓			✓						✓	✓
No regular religious activity		✓				✓															✓			✓						✓	✓
No regular social activity																					✓			✓						✓	✓
No regular sporting activity						✓												✓			✓			✓				✓		✓	✓

Cohort	National Child Development Study (NCDS, 1958)																													
Age at sweep	10	11	13	14	15	16	17	18	19	20	21	22	23	24	25	26	30	31	33	34	36	38	42	43	44	46	50	53	55	64	70
Household																															
Household size		✓				✓							✓						✓				✓			✓	✓		✓		
Living alone		✓				✓							✓						✓				✓			✓	✓		✓		
Family and Friends																															
No partner													✓						✓				✓			✓	✓		✓		
No friends																									✓						
No regular contact with family and friends outside household		✓											✓										✓		✓		✓				
Education and Employment																															
Neither in education nor employment		✓				✓							✓						✓				✓			✓	✓		✓		
Community																															
No membership to clubs/organisations/groups		✓																	✓							✓	✓		✓		
No volunteering						✓							✓						✓							✓	✓		✓		
No regular religious activity													✓						✓				✓			✓	✓				
No regular social activity						✓							✓														✓		✓		
No regular sporting activity		✓				✓							✓													✓	✓		✓		

Cohort	1970 British Cohort Study (BCS70)																													
Age at sweep	10	11	13	14	15	16	17	18	19	20	21	22	23	24	25	26	30	31	33	34	36	38	42	43	44	46	50	53	55	64	70
Household																															
Household size	✓					✓										✓	✓			✓		✓	✓			✓					
Living alone	✓					✓										✓	✓			✓		✓	✓			✓					
Family and Friends																															
No partner						✓										✓	✓			✓		✓	✓			✓					
No friends	✓					✓																	✓			✓					
No regular contact with family and friends outside household						✓											✓			✓			✓			✓					
Education and Employment																															
Neither in education nor employment	✓					✓										✓	✓			✓		✓	✓			✓					
Community																															
No membership to clubs/organisations/groups	✓					✓											✓			✓						✓					
No volunteering						✓											✓			✓			✓								
No regular religious activity						✓											✓			✓			✓								
No regular social activity	✓					✓														✓			✓								
No regular sporting activity	✓					✓																	✓			✓					

Cohort	Next Steps (NS, born 1989–90)																														
Age at sweep	10	11	13	14	15	16	17	18	19	20	21	22	23	24	25	26	30	31	33	34	36	38	42	43	44	46	50	53	55	64	70
Household																															
Household size				✓	✓	✓	✓	✓	✓	✓					✓																
Living alone				✓	✓	✓	✓	✓	✓	✓					✓																
Family and Friends																															
No partner									✓	✓					✓																
No friends					✓				✓	✓					✓																
No regular contact with family and friends outside household				✓	✓										✓																
Education and Employment																															
Neither in education nor employment				✓	✓	✓	✓	✓	✓	✓					✓																
Community																															
No membership to clubs/organisations/groups				✓	✓		✓								✓																
No volunteering				✓	✓				✓	✓					✓																
No regular religious activity				✓	✓		✓								✓																
No regular social activity				✓	✓		✓								✓																
No regular sporting activity				✓	✓		✓								✓																

Cohort	Millennium Cohort Study (MCS, born 2000–02)																														
Age at sweep	10	11	13	14	15	16	17	18	19	20	21	22	23	24	25	26	30	31	33	34	36	38	42	43	44	46	50	53	55	64	70
Household																															
Household size		✓		✓			✓																								
Living alone		✓		✓			✓																								
Family and Friends																															
No partner				✓			✓																								
No friends		✓		✓			✓																								
No regular contact with family and friends outside household		✓		✓			✓																								
Education and Employment																															
Neither in education nor employment		✓		✓			✓																								
Community																															
No membership to clubs/organisations/groups				✓			✓																								
No volunteering							✓																								
No regular religious activity		✓		✓			✓																								
No regular social activity				✓			✓																								
No regular sporting activity		✓																													

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