

Deriving population estimates from YouGov surveys

YouGov survey respondents are drawn from a large pool of potential respondents. Active Sampling ensures that the right people are invited in the right proportions. In combination with statistical weighting, this ensures that results are representative of the country as a whole. Questions are sent out with a sufficient time period for response to attract at least 2000 respondents (adults, aged 18 and above). Samples are weighted to match the adult UK population by age, gender and region, social grade and highest education level. For more details on how YouGov polling works, see <https://yougov.co.uk/solutions/research/realtime/gb-and-uk>.

To secure a robust sample of a population sub-group – e.g. parents/guardians living with children, multiple waves needs to be run one after the other until the desired sample size is reached. While it is theoretically possible to include more than one adult from a single household in the sample, we have been assured by YouGov that in practice this is extremely rare.

In order to derive population estimates from data on percentage of respondents, the correct population figures must be used as denominators.

For adults aged 18 and over this is straight forward and we have used, up to June 2020, mid-year estimates for 2018 and after June 2020 we used mid-year estimates for 2019 as the government published these in June (see [here](#)).

For results relating to households with children, it is more complicated.

The government population data on households with children distinguishes between dependent and non-dependent children (see [here](#))

"Dependent children" are:

those living with their parent(s) who are either

- *aged under 16 years, or*
 - *aged 16 to 18 years*
- and who are in full-time education, excluding children aged 16 to 18 years who have a spouse, partner or child living in the household.*

"Non-dependent children" are:

those living with their parent(s) and who are either

- *aged 19 years or over, or*
 - *aged 16 to 18 years*
- and who are not in full-time education and have no spouse, partner or child living in the household*

The government publishes data on:

The total population living in households with dependent children (see [here](#) Table 2)

The total number of dependent children (see [here](#) Table 4) from which can be extrapolated the total number of non-dependent children and adults living in households with dependent children:

29,822,000 (total population living with dependent children)-14,211,000 (dependent children)=15,611,000 (adults and non-dependent children living with dependent children)

Because YouGov surveys sample adults (aged 18 and over) who are living with children under age 18, it is possible that the sample will include adults who *only* have non-dependent children aged 16 or 17. Therefore, we examine these households from the sample before the analysis and presentation of data on adults in households with children to determine whether they have food insecurity characteristics which are different from the whole sample and if so remove them.

In order to then derive population estimates we would do the following by way of example: if 5% of our sample report food insecurity we would take 5% of 15,611,000 and conclude that 780,550 adults living with children are affected by food insecurity.

For estimating the number of children living with adults affected by food insecurity, we total the number of children <18 years living with adults who reported food insecurity in our sample and divided this by the total number of children <18 years living with in households in the entire sample to obtain a proportion. This proportion was then applied to the total national population of children aged <18 years obtained from [2019 mid year estimates](#).

For estimating whether children entitled to (means tested) free school meals were receiving services, we asked adult respondents if they had a child aged 8-16 years. This excluded children aged 7 and below who are, in some parts of the United Kingdom, receiving Universal Infant Free School Meals. We asked adults if their children in this age band were receiving free school meals and if so whether they had received access to other services. The resulting proportions were applied to the total number of children currently uptaking free school meals in the different UK nations (1.7 million children (Round 6 survey)). Sources for this uptake data are: [Wales: Freedom of Information request 2020](#); [Northern Ireland: School Meals in Northern Ireland 2019/2020](#); [Scotland: School Healthy Living Survey 2019](#); [England: School Pupil Characteristics 2020](#).

Deriving population estimates from Childwise surveys

The Childwise sample (gathered in early September) was made up of 1064 children and young people aged 7-17 across the UK, sampled via an online panel of adults (including parents), using carefully constructed quotas to ensure as representative a sample as possible.

The online panel they use is the largest in the UK and globally. The panel is a member of the ESOMAR community, the primary aim of which is to increase transparency and raise awareness of key issues when considering online sampling. The panel strives to be as representative as possible, including recruiting members from the top and bottom socio-economic groups (As and Es), with members recruited by a mixture of sources (invitation only, online partnerships, online sites).

To ensure the sample is as representative as possible, quotas were applied for the following non-interlocking criteria:

- Region NE (4%) / NW (11%) / YKS (8%) / EM (7%) / WM (9%) / EA (9%) / LO (13%) / SE (14%) / SW (9%) / SC (8%) / WA (5%) / NI (3%)
- Socio Economic Status ABC1 (60%) / C2DE (40%)
- Child's gender Boy (50%) / Girl (50%)
- Child's age 7-10 (33%) / 11-14 (33%) / 15-17 (33%)
- Child's ethnicity White (80%) / BAME (20%)

To achieve these representative quotas most efficiently, the sample approach was to utilise the panel's profiling data and target the harder demographics first, whilst releasing smaller amounts of other sample batches to trickle through. Once these were complete, sample was released to fill the other demographics. Any slight discrepancies in sample balance can be adjusted by weighting the data.

The sample was recruited to be representative by region, broad ethnic group, and spread evenly by age and gender. Childwise split the sample into three broad age bands, 7-10, 11-14, and 15-17.

It is not possible for more than one child per household to take part. The panel has many different ways of recruiting and children are recruited via their parents, so Childwise clustering around schools is very unlikely.

Socio-economic status is asked (of the parent) at the beginning of the survey. Parents are asked to indicate their occupational group (from a list of 12) for the chief income earner in their household. These groups are then categorised (by the panel) into the broader socio-economic groups (ABC1 / C2DE). The occupational grouping question is self-identifying though, so someone that has recently been made redundant could choose to put themselves in as unemployed or they could give their most recent occupation.

The 12 occupational groups are:

Semi or unskilled manual work (e.g. Manual workers, all apprentices to be skilled trades, Caretaker, Park keeper, non-HGV driver, shop assistant)	1 (C2DE)
Skilled manual worker (e.g. Skilled Bricklayer, Carpenter, Plumber, Painter, Bus/ Ambulance Driver, HGV driver, AA patrolman, pub/bar worker, etc)	2 (C2DE)
Supervisory or clerical/ junior managerial/ professional/ administrative (e.g. Office worker, Student Doctor, Foreman with 25+ employees, salesperson, etc)	3 (ABC1)
Intermediate managerial/ professional/ administrative (e.g. Newly qualified (under 3 years) doctor, Solicitor, Board director small organisation, middle manager in large organisation, principle officer in civil service/local government)	4 (ABC1)
Higher managerial/ professional/ administrative (e.g. Established doctor, Solicitor, Board Director in a large organisation (200+ employees, top level civil servant/public service employee))	5 (ABC1)
Student	6 (ABC1)
Casual worker – not in permanent employment	7 (C2DE)
Housewife/ Homemaker	8 (C2DE)
Retired and living on state pension	9 (C2DE)
Unemployed or not working due to long-term sickness	10 (C2DE)

Full-time carer of other household member	11 (C2DE)
Other	12 (C2DE)

In order to derive population estimates from data on percentage of respondents, we have grossed up the percentages to the population size of children aged 8-17 (7 year olds in year 2 or equivalent were excluded from the survey as they would be on UIFSM). This has been done in the same way as for the YouGov surveys.

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