

## 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](#).

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