

Perceptions are not reality: the top 10 we get wrong

Methodology note

Ipsos MORI carried out 1,015 interviews online with adults aged 16-75. Fieldwork took place between 14th – 18^h June 2013. Data are weighted to match the profile of the UK population within that age range.

Several questions (5-8, 10-12, 19, 26 and 31-33) ask for a percentage estimate to the nearest whole number. Any whole number between 0 and 100 or 'Don't know' was allowed in response. These responses were later grouped into categories and reported as means.

Means were calculated based on the number of people giving a numerical response, that is, we excluded any 'Don't know' responses. We have not excluded outliers. For the reporting and press release means were used mostly because these are more easily understood than mode or median among the general public and media: the media in particular usually focus on means as a measure of average. However, the detailed computer tables that were published included the full distribution of answers given to allow people to see the range and extent of outliers.

This is also the standard approach used on similar past questions, including exact questions that we used for trending purpose: for example analysis of British Social Attitudes data on estimations of population characteristics published in their report in 2002^a.

Prior to release we did check the impact of outliers on the means, and calculated medians for comparison on a number of the key variables – and concluded that the differences did not change the story significantly enough to justify the added complication/risk of confusion from explaining medians.

However, it is an interesting and important point to compare them, so we have now calculated medians for all relevant questions and reproduced these below alongside the means and actual proportions.

This confirms that the overall story of significant overestimation (and in some cases, underestimation) remains the same if we compare the median response with the actual rather than the mean. For example, this is even the case on one of the questions that shows the greatest difference - Q7, which asks what proportion of girls under the age of 16 years in Britain get pregnant each year. In England and Wales 0.6%^b of 13-15 year old girls have a legal abortion or give birth to a live- or still-born baby (note that this is not an exact equivalent to the question as asked, but it is the best available source and is what was used in a very similar question asked previously^c). The mean estimate is 15%; 25 times higher than the actual proportion. Although the median response of 10% is 5 percentage points lower than the mean this is still 17 times higher than the actual proportion.

Interestingly, two of the questions that show the greatest variation between mean and median are those that ask for an estimate of a *subset* of a population or behaviour; that is, it's when people are asked to estimate what proportion of immigrants are asylum-seekers and what

^a E.g. Taylor-Gooby, P. (2002) Chapter 4, British Social Attitudes 19th Report. NatGen.

^b <http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcm%3A77-294336>

^c NHS estimates suggest that an additional 0.06% of 13-15 year old girls each year will experience a miscarriage. <http://www.nhs.uk/Conditions/Miscarriage/Pages/Causes.aspx>

proportion of crimes involve violence that we see the biggest differences between means and medians. This may reflect the greater uncertainty of some respondents (i.e. there may be a multiplied effect as it requires a more complex mental calculation as people try to think of both “crime” and “violent crime”).

As noted above, respondents could give any whole number answer, and were generally not given ranges or categories to choose from (with the exception of the anchoring experiment discussed below). Therefore, while the results were reported as the proportion who, for example, said 1-10%, this was our grouping post-survey. One question where this whole number approach was probably not ideal was on benefit fraud, given the incidence is actually below 1% (at 0.7%). Respondents could of course select 1 out of 100 (as the nearest whole number), but if we were running this again, we would allow alter that instruction.

There are a number of other questions we would alter if we had the opportunity. For example, we asked respondents to estimate the proportion of the population that voted at the last general election, but did not specify adults/the electorate. This could have led to some confusion and inconsistency in how people responded. Similarly, we would have altered the question on the estimate of single parents to make clear this was of the population or of families; respondents may have interpreted this in different ways. This was partly a result of trying to include as many variables as possible in the same simple questionnaire structure, in what was a quite small/limited survey.

Another query that has been raised is why the sample was split in Q10-12 and recombined for Q13. Questions 10-12 were split as part of a small questionnaire design experiment to see if the average response changed when respondents were given prompted categories rather than asked for an unprompted percentage (to test the impact of anchoring). In this case the mean was slightly closer to the correct answer when the public were given categories to select from (that started deliberately low). The sample was recombined in question 13 as we were interested in the reasoning given for all overestimates (everyone who estimated that the incidence of immigrants in the population was 26% or higher, twice the official estimate).

Where available the statistics used to illustrate the actual percentages cover the whole of the UK to mirror the sample. In some instances statistics are not reported at the UK level and inconsistencies of reporting between countries mean the national figures can't be aggregated. In these cases figures that cover Great Britain (97% of the UK population) or England and Wales (89% of the UK population) have been used^d. For example the conception rate in girls aged 13-15 years is reported in both England and Wales (0.6%^e) and Scotland (0.6%^f). However in Northern Ireland official statistics don't report the conception rate for this age group, instead reporting the number of live births to under-17s (110 in 2011^g). We ensured that all sources were flagged, and reproduce these in the table below.

^d <http://www.ons.gov.uk/ons/rel/census/2011-census/population-and-household-estimates-for-the-united-kingdom/rft-table-2-census-2011.xls>

^e <http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcm%3A77-294336>

^f <http://www.isdscotland.org/Health-Topics/Sexual-Health/Publications/2013-06-25/2013-06-25-TeenPreg-Summary.pdf?64928835631>

^g http://www.nisra.gov.uk/archive/demography/publications/births_deaths/births_2012.pdf

| Question | Mean % | Median % | Actual % | Coverage of 'actual' percentage | Source |
|---|--------|----------|----------|---------------------------------|------------------------------------|
| 5) Out of every 100 people in Britain, about how many do you think: | | | | | |
| Are Christian | 34 | 30 | 59 | England & Wales | Census |
| Are Muslim | 24 | 20 | 5 | England & Wales | Census |
| Are over 65 | 36 | 33 | 16 | England & Wales | Census |
| Voted in last election | 43 | 40 | 65 | UK adults | Electoral Commission |
| Are Black or Asian | 30 | 25 | 11 | England & Wales | Census |
| Are single parents | 28 | 25 | 3 | UK | ONS |
| 6) Out of every 100 children under 16 in Britain, about how many do you think live in poverty? | 26 | 20 | 20 | UK | Guardian Datablog |
| 7) In your opinion, what proportion of girls under the age of 16 years in Britain get pregnant each year? | 15 | 10 | 0.6 | England & Wales | ONS |
| 8) Of every 100 crimes committed in Britain today, about how many do you think involve violence or the threat of violence? | 33 | 25 | 24 | England & Wales | Crime Survey for England and Wales |
| 10) What percentage of the United Kingdom population do you think are immigrants to this country (i.e. not born in the UK)? | 31 | 26 | 13 | England & Wales | Census |
| 12) And what percentage of <u>immigrants</u> to this country do you think are <u>asylum-seekers</u> ? | 21 | 10 | 4 | UK | Home Office |
| 19) Out of every £100 spent from the welfare budget, can you tell me how much of that is claimed fraudulently? | 24 | 20 | 0.7 | Great Britain | DWP |
| 26) Out of every 100 people of working age in the UK, how many do you think are currently unemployed? | 22 | 15 | 8 | UK | ONS |
| 31) What percentage of adults in Britain do you think read a national daily newspaper on an average day? | 39 | 35 | 35 | UK | National Readership Survey |
| 32) What percentage of people in Britain do you think have a twitter account? | 31 | 30 | 16 | Great Britain | Ipsos MORI Tech Tracker |
| 33) What percentage of people in Britain do think have a Facebook account? | 47 | 50 | 49 | Great Britain | Ipsos MORI Tech Tracker |