

Sexual orientation QMI

Quality and methodology information (QMI) report for sexual orientation, detailing the strengths and limitations of the data, methods used, and data uses and users.

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1 . Output information

- National Statistic: no
- Survey name: Sexual orientation, UK
- Frequency: annual
- How compiled: Annual Population Survey (Persons dataset)
- Geographic coverage: UK
- Sample size: approximately 130,000 individuals per year on average
- Last revised: 27 September 2023

2 . About this Quality and Methodology Information report

This Quality and Methodology Information (QMI) report contains information on the quality characteristics of the data (including the European Statistical System's five dimensions of quality) as well as the methods used to create it.

The information in this report will help you to:

- understand the strengths and limitations of the data
- learn about existing uses and users of the data
- understand the methods used to create the data
- decide suitable uses for the data
- reduce the risk of misusing the data

3 . Important points

- The latest publication, [Sexual orientation, UK: 2021 and 2022](#) presents estimates of sexual orientation for 2021 and 2022 for the first time and revised estimates for 2020.
- The estimates for the reference years 2014 to 2017 presented in our [Sexual orientation, UK: 2018 bulletin](#), the associated datasets and subsequent releases have been revised and differ from previous publications; details about these revisions can be found in [Section 7: Other information](#) of this report.
- From the Sexual orientation, UK: 2017 release, the title of the release, the title of the release changed from "sexual identity" to "sexual orientation" to align with terminology used in legislation ([Equality Act 2010](#)); sexual orientation is an umbrella concept that encapsulates sexual identity, behaviour and attraction; it may change over time.
- This release reports on data from a survey question designed to capture sexual identity.
- The measurement of sexual identity has been identified as the component of sexual orientation most closely related to experiences of disadvantage and discrimination; sexual identity does not necessarily reflect sexual attraction and/or sexual behaviour, which are separate concepts currently not measured by the Annual Population Survey (APS).
- Sexual orientation estimates are [Experimental Statistics](#) that provide annual estimates of the UK household population aged 16 years and over broken down into heterosexual or straight, gay or lesbian, bisexual, or other, back to 2014 for England, Scotland and Wales, and 2012 for Northern Ireland.
- The "other" category captures people who do not consider themselves to fit into the heterosexual or straight, bisexual, gay, or lesbian categories; it might also include people who responded "other" for different reasons such as those who did not understand the terminology or who are against categorisation.
- There is currently no further breakdown of "other" collected in the APS, so no assumptions can be made about the sexual orientation of those responding "other".
- Data in the bulletin are primarily presented in percentage format, although estimates are used where needed to provide scale to the percentages; estimates of the population numbers and measures of quality (to show the levels of [uncertainty](#) associated with survey estimates) are presented in the [dataset](#), users are advised to consult the quality measures when interpreting the estimates.
- The estimates published from 2016 onwards are calculated from the APS; previously, they were calculated using the Integrated Household Survey (IHS).

4 . Quality summary

Overview

At the UK level, sexual orientation estimates are published annually separately by sex, age group, National Statistics socio-economic classification (NS-SEC), legal partnership status, ethnic group, and English regions and UK countries. In 2019, we published for the first time a multivariate table of sexual orientation by combined age group and sex.

[Experimental Statistics](#) are those that are in the testing phase, are not yet fully developed and have not been submitted for assessment to the Office for Statistics Regulation (OSR). They are published to involve customers and stakeholders in their development and as a means to build in quality at an early stage.

Estimates are published rounded to the nearest thousand, and percentages are also presented alongside the estimates. Estimates based on sample sizes of fewer than three are suppressed in published tables but where appropriate, categories have been collapsed to minimise the need for suppressing data.

Uses and users

Sexual orientation estimates have a number of uses, both direct and indirect, informing policy decisions at a national level. The estimates are mainly used to provide evidence and to inform the monitoring of the [Equality Act 2010](#), alongside providing estimates of the lesbian, gay or bisexual (LGB) population for service providers. Users include policymakers in central government departments, local government, public service providers, the LGB population, associated service providers, academics and other research organisations.

Strengths and limitations

Strengths

These data provide users with valuable insight into the changing patterns of sexual orientation (measured via sexual identity) on a consistent basis back to 2014.

The survey estimates are sourced from the Annual Population Survey (APS), which provides robust and representative survey estimates used for labour market statistics, economic statistics, and family and household statistics.

[Confidence intervals](#) and an indication of the size of the [coefficient of variation](#) are presented around the estimates to give users an indication of the reliability of the estimates.

The variable groupings used in the published datasets are based on the [Government Analysis Function harmonised standards](#).

Limitations

Sexual orientation is an umbrella concept that encompasses sexual identity, attraction and behaviour. The survey questions underlying this release are designed to capture sexual identity. An individual could respond differently to questions on either sexual identity, attraction or behaviour. The sexual orientation harmonised standard has recently been updated to include recent research by census. This research suggested that including sexual orientation in the question did not make a material difference. The measurement of sexual identity was identified in the research as the component of sexual orientation most closely related to experiences of disadvantage and discrimination. The question was not designed for specific or detailed studies of sexual behaviour or attraction, where a series of more detailed questions and answer categories might be more appropriate.

The APS excludes people living in communal establishments with the exception of those in NHS housing and students in halls of residence (sampled via the private households of their parents). Members of the armed forces are only included in the APS if they live in private accommodation. In the 2021 Census, 1.7% of the usually resident population of England and Wales were living in communal establishments, the same proportion as in the 2011 Census. An [analysis of the characteristics of these residents](#) is available.

Although the APS samples approximately 320,000 individuals per annum, data collected on sexual orientation are only for those aged 16 years or over, and the survey is not completed by proxy (meaning that an individual cannot provide responses on another's behalf). Sexual orientation data for 2022 are based on approximately 130,000 individual responses. Sample sizes are small for some variables, particularly when producing multivariate tables such as sexual orientation by ethnic group, which results in estimates being less reliable in those cases.

The APS does not collect gender identity, nor does it collect further information on those classified as "Other"; no assumptions can be made about the sexual orientation of this group.

Recent improvements

In the [Sexual orientation, UK: 2021 and 2022](#) release, the estimates for 2020 were reweighted using 2022 weights, so these may differ slightly from those previously published for 2020.

Estimates presented in our [Sexual orientation, UK: 2018 bulletin](#) and the associated datasets for the reference years 2014 to 2017 were revised. This revision was made in order to incorporate the re-weighting of the Labour Force Survey (LFS) and APS and to incorporate an improvement made to the sexual orientation variables on the LFS and APS. This improvement has subsequently been applied to the 2019, 2020 and 2021 estimates. Details about the revisions can be found in [Section 7: Other information](#).

In 2019, an additional table was published that broke down sexual orientation estimates by sex and age group at the UK level for the first time.

In 2016, the methodology for producing the sexual orientation estimates was updated in line with the move to using the APS rather than the Integrated Household Survey (IHS); see [Section 7: Other information](#) for further information.

The move to using the APS resulted in the collection of sexual orientation data for some cases that would not have been collected on the IHS.

5 . Quality characteristics of the sexual orientation data

Relevance

This release provides an experimental set of sexual orientation estimates for the UK and is published for 2014 to 2022. The published estimates meet the known user needs outlined in [Section 4: Quality summary](#).

Sexual orientation is an umbrella concept that encompasses sexual identity, attraction and behaviour. The question described in the harmonised principle on sexual orientation is based on a substantial body of research and is designed to capture sexual identity. Through focus groups, users were consulted concerning and involved in the development of the sexual identity questions throughout the Sexual Identity Project we conducted between 2006 and 2009.

These estimates are published as [Experimental Statistics](#). This is because the estimates and the publication may evolve as we continue to establish the user needs and requirements.

For the first time in 2019, an additional table showing sexual orientation by sex and age group was published at the UK level in response to user demand. Because of small sample sizes, we do not publish equivalent tables for English regions and countries of the UK as part of our regular publications. APS estimates are recommended when making comparisons with estimates for the UK as a whole, or to evaluate change over time, while census results provide more granular breakdowns for England and Wales.

Users are encouraged to email feedback and suggestions regarding the sexual orientation estimates and publication to the team at pop.info@ons.gov.uk.

Accuracy and reliability

The estimates are sourced from the Annual Population Survey (APS), which provides robust and representative survey estimates used for labour market statistics, economic statistics, and family and household statistics. [Sampling and non-sampling error](#), along with information on measuring error, can be found in [our Annual Population Survey Quality and methodology information](#).

For users to gain an understanding of the level of accuracy of the sexual orientation estimates, the estimates in the datasets are presented with [confidence intervals](#) and also an indication of the size of the [coefficient of variation](#). In the bulletin, where changes over time are described as an increase or a decrease, it means the change is "[statistically significant](#)". This means that a statistical test has shown that there is likely to have been a real change in the underlying population proportions and that the difference we are observing is unlikely to be a result of chance.

Coherence and comparability

We publish sexual orientation estimates for the UK and its constituent countries to meet user needs, as described in the ["Relevance" subsection](#) of this report.

We produced a short report in 2008 entitled [Review of international organisations' experiences of administering questions on sexual identity/orientation \(PDF, 230KB\)](#) that explored the different experiences of other international organisations when collecting data on sexual orientation.

Sexual identity estimates have been published previously for 2010 to 2014. These estimates were derived from [our Integrated Household Survey \(IHS\)](#) and then the APS using IHS methodologies. In 2016, estimates were published for 2012 to 2015 derived from the APS using APS methodologies. [Our spreadsheet showing differences between selected sexual identity estimates from the IHS and the APS](#) is available. More detail regarding the change from the IHS to the APS can be found in [Section 7, Other information](#).

In 2020 further adjustments were made to the estimates for the reference years 2014 to 2017, meaning a consistent time series for the UK is now available back to 2014 rather than 2012. Details about revisions to the estimates presented in [our Sexual orientation, UK: 2018 bulletin](#) and the associated datasets can be found in [Section 7, Other information](#).

It may be necessary to make future revisions to the sexual orientation estimates to reflect occasional or post-census revisions to the national mid-year population estimates, which will also have an effect on the weighting used for the APS. This is in line with the [Office for National Statistics \(ONS\) revision policy for population statistics \(PDF, 54KB\)](#).

[Estimates of sexual orientation for England and Wales from Census 2021](#) have been published and [quality information](#) is available for these estimates.

There are differences between the survey and census-based estimates because of differences in the question asked, including the available response options, and the larger number of responses to the census question overall. The method of delivery can also affect engagement, for example, it being a legal requirement to complete the census, albeit that the sexual orientation question was voluntary, may yield different results to a voluntary survey. Additionally, it was possible to provide a proxy response on someone else's behalf on the census, while proxy responses are not permitted for the question on sexual identity on the APS. More information can be found in [Sexual orientation question development for Census 2021](#).

APS data cover the UK with its four constituent countries, whereas census results currently only exist for England, Wales and Northern Ireland. A comprehensive appraisal of census data against APS data is anticipated once data from all four countries are available.

Five-year comparisons are used in the bulletin rather than year-on-year comparisons as the APS data on sexual identity typically vary between years because of sample variability, and comparing across a longer timescale allows us to more clearly identify trends in the data.

Accessibility and clarity

The recommended format for accessible content is HTML5 and/or PDF/A for narrative, charts and graphs. Data should be provided in open, reusable and machine-readable formats such as CSV and ODF. An option to download or print the content should also be available.

In addition to this QMI, quality and methodology information is included in [our Sexual orientation, UK: 2018 bulletin](#).

For information regarding conditions of access to data, please refer to the following pages:

- [Terms and conditions \(for data on the website\)](#)
- [Accessibility](#)

Timeliness and punctuality

Sexual orientation estimates for the UK are published annually. For a particular reference year, they usually become available around 10 months after the end of that reference year, although recently timings have varied because of the publication of [Census 2021](#). The latest release was published on 27 September 2023.

The time lag and the publication date for sexual orientation estimates are influenced by the availability of the APS persons dataset and the time required to process the data and calculate the estimates. The feasibility of producing statistical releases earlier is regularly reviewed.

For more details on related releases, [our release calendar](#) provides up to 12 months' notice of release dates. In the unlikely event of a change to the pre-announced release schedule, public attention will be drawn to the change and the reasons for it explained fully at the same time, as set out in the [Code of Practice for Statistics](#).

Concepts and definitions

The statistics comply with the [Code of Practice for Statistics](#).

Sexual orientation is an umbrella concept that encapsulates sexual identity, behaviour and attraction. The APS collects data on sexual identity. In 2006, we established a project to meet user requirements for information on sexual identity. The aim of this was to address a lack of sufficient and reliable sources of data on sexual orientation, which was identified in [our cross-government review of equality data](#).

The Sexual Identity Project had three main objectives: question development, question testing, and implementation and guidance. The project was concluded with the sexual identity question being added to the IHS in 2009. The measurement of sexual identity was identified in the research as the component of sexual orientation most closely related to experiences of disadvantage and discrimination. The question was not designed for specific or detailed studies of sexual behaviour or attraction where a series of more detailed questions and answer categories might be more appropriate. [Sexual identity guidance and project documentation](#) are available.

The resulting question from the Sexual Identity Project underlies the harmonised standard on sexual orientation and is part of a set of [harmonised standards](#), which are published by the Government Analysis Function.

The variable groupings used in the datasets have been based on our harmonised standards.

Geography

Sexual orientation estimates are produced by us for the UK, its constituent countries and English regions.

Sexual orientation estimates for geographies lower than UK countries and English regions are not produced routinely. However, a [research article](#) was published in April 2017, which looked at the feasibility of using a three-year pooled APS dataset to produce sub-national estimates. This exercise was repeated again in 2020 to produce [ad-hoc research](#) using the 2016 to 2018 pooled APS data. We will continue to monitor sample sizes at the sub-national level to assess whether these estimates will be robust enough to publish sub-national level data in the future.

Estimates of [sexual orientation at local authority level](#) are available from Census 2021.

Output quality

The cross-tabulations contained in the published datasets are selected to ensure the estimates are of the highest quality, accurate and robust. In some cases, the categories that have been selected will have been collapsed to ensure the data are robust while maintaining their usefulness.

Estimates and percentages in the reference tables are accompanied by both confidence intervals and coefficients of variation, which inform users about the level of uncertainty around an estimate or percentage.

6 . Methods used to produce the sexual orientation data

Main data sources

The Annual Population Survey (APS) persons dataset is used in the production of these estimates. The APS persons dataset differs from the household dataset in the way that the weighting is applied to the sample. The household dataset ensures that the weight given to each member of a household is the same. The persons dataset, which is more commonly used for information on the labour market or individual characteristics, includes only individual weights, which usually differ between members of a household.

The [APS](#) is a continuous household survey, covering the UK. The APS is not a stand-alone survey; it uses data combined from two waves of the main [Labour Force Survey \(LFS\)](#), supplemented by a local sample boost. It covers people in private households, NHS accommodation and students in halls of residence whose parents live in the UK. Such students are included through proxy interviews with their parents, although sexual orientation data are not collected by proxy. Members of the armed forces are only included in the APS if they live in private accommodation.

The main purpose of the survey is to provide information on the UK labour market, but it includes data on various other demographic and social variables. The survey does not cover the 2% of the population who live in communal establishments such as prisons and nursing homes. The overall sample size of the survey is approximately 320,000 respondents. The datasets consist of 12 months of survey data.

Previously, sexual orientation estimates were based on data from the Integrated Household Survey (IHS). More detail regarding the change from the IHS to the APS can be found in [Section 7: Other information](#).

How we analyse the data

The sexual orientation estimates are calculated using the weighted survey estimates from the APS for the UK.

Weighted sexual orientation estimates from the APS are cross-tabulated with social, demographic and geographic variables. These include age group, sex, age-group by sex, National Statistics Socio-economic Classification (NS-SEC), marital or legal partnership status, ethnic group, and English regions and UK countries.

Estimates based on sample sizes of fewer than three are suppressed in published tables, but the tables have been designed to minimise the need for suppression (for example, by providing age groups or collapsing ethnic group categories).

The sexual orientation weighted estimates are published rounded to the nearest thousand; percentages are also presented alongside the estimates.

How we quality assure the data

Once the APS dataset used in the production of the sexual orientation estimates is received, quality assurances are carried out. The quality assurance assesses whether the estimates of sexual orientation and various cross-tabulations look plausible by comparing with previous years and by looking for anomalies in the data. Basic checks include ensuring age, sex profiles, and regional or country totals match those of the total APS population.

If any substantial issues are found, these are referred back to our Social Survey Division for validation and correction.

How we disseminate the data

Sexual orientation, UK estimates are available online from 2014 to 2022.

Links from [our release calendar](#) make the release date and location of each new set of estimates clear. The estimates can be downloaded free of charge in Microsoft Excel format and are available from [our Sexual orientation, UK previous releases page](#). A statistical or headline-only bulletin accompanies each publication. The underlying data for the charts and tables in the bulletin can be downloaded. Supporting documentation is also available on the release pages.

Other data not published on the website are available on request by emailing pop.info@ons.gov.uk. Metadata describing the limitations of the data for more detailed tables are provided with each individual request. Most queries can be answered from the website datasets or supporting methods documents. Any additional enquires regarding the sexual orientation data can be made by emailing pop.info@ons.gov.uk.

How we review the data

It may be necessary to make future revisions to the sexual orientation estimates to reflect occasional or post-census revisions to the national mid-year population estimates, which will also have an effect on the weighting used for the APS. This is in line with the [Office for National Statistics \(ONS\) revision policy for population statistics \(PDF, 54KB\)](#).

7 . Other information

Moving from the Integrated Household Survey (IHS) to the Annual Population Survey (APS)

In 2016, the methodology for producing the sexual orientation estimates was updated and applied to estimates back to 2012. This is because of the discontinuation of the Integrated Household Survey (IHS) datasets from 2015 onwards; IHS questions were removed from the Living Costs and Food Survey (LCF) in January 2014 and IHS variables were added to the Annual Population Survey (APS) persons datasets for the survey months January to December 2014 (IHS specific methodologies were still applied). This is also because of the integration of the IHS variables into the APS persons datasets from 2015 onwards (variables have also been incorporated onto historical APS persons datasets for 2012 to 2014 to enable the creation of estimates on a comparable basis).

The integration of the IHS variables into the APS means that the sexual identity variables are now subject to a different processing methodology (including imputation and calculation of weights). Methodology details are available for the [IHS](#) and [APS \(PDF, 689KB\)](#).

Moving from the IHS to the APS has had only a small effect on the estimates; this is because most cases sampled on the IHS were drawn from the APS originally. The APS methodology means that some cases that would not have had their sexual identity collected on the IHS will have their sexual identity collected on the APS (for example, persons who are first interviewed in a later wave than the household was first selected for interview). The weighting methodology used on the APS differs to the IHS for the cases that it selects for weighting. This improvement has led to the removal of the "non-response" category in the datasets.

The weighting that is applied for the sexual identity variable and cross tabulations differs to the weighting that would normally be applied to the APS persons dataset. The weighting differs because:

- of the combining of cases from Wales and Scotland
- of the age filtering of cases (only age 16 years and over)
- only those cases who answered the sexual identity questions are used in the weighting

The sexual identity variables were successfully integrated into the APS back to the year 2012.

Improvements to the data for the 2018 Sexual orientation publication

The estimates presented in [our Sexual Orientation: UK, 2018 bulletin](#), along with the associated datasets for the reference years 2014 to 2017, have been revised and now differ from publications released prior to the release of the 2018 estimates in 2020. The estimates were revised for two reasons. The first reason is to incorporate the re-weighting of the Labour Force Survey (LFS) and APS, and the second reason is to incorporate an improvement made to the sexual orientation variables on the LFS and APS.

The improvement was made as a result of the detection of an issue in the data collection process relating specifically to the sexual identity question. This issue resulted in an artificially increased number of "don't know or refuse" responses to interviews carried out by field interviews using a mobile phone. In the past, the number of these interviews was very small, but over time this has increased to try to improve overall LFS response rates. To adjust for this quality issue, cases were removed where the interview was carried out by a field interviewer with a mobile phone. After removing these cases, we have re-weighted the responses to take into account the smaller sample size and associated weighting.

We have made this adjustment for the years 2014 to 2019. Because the variable used to identify field interviews carried out by mobile phone is not available for the sexual orientation data prior to 2014, estimates for the years 2012 and 2013 have not been revised. A comparable time series of estimates is therefore now available back to 2014.

This applies to estimates for the UK, England, Wales and Scotland only. Because Northern Ireland field interviews are all carried out face to face, sexual orientation data for Northern Ireland are unaffected by this. Estimates for Northern Ireland from 2012 to 2017 differ from previously published figures as they have been revised following the re-weighting of the APS, but they have not been subject to any further changes. As previously, a comparable time series of estimates for Northern Ireland is therefore available back to 2012.

Adjustments to future estimates

A solution was implemented in January 2020, but because of the wave-based design of the survey, this does not fully eliminate the presence of cases affected by this from the sexual orientation estimates until 2022. Therefore, in production of estimates for 2020 the adjustment was applied. For 2021 only the data for Waves 3 and 4 (where respondents had been on the survey since before 2020) needed to be adjusted. Data for 2022 onwards do not need to be adjusted.

More detailed information on the sexual identity question and design of the APS is available in the [LFS user guide](#).

Useful links

[Sexual orientation data tables](#)

[Sexual orientation, UK statistical bulletins](#)

[Annual Population Survey \(APS\) user guidance \(PDF, 689KB\)](#)

[Sexual identity guidance and project documentation](#)

[Sexual orientation, England and Wales: Census 2021](#)

[Sexual orientation and gender identity quality information for Census 2021](#)

8 . Cite this methodology

Office for National Statistics (ONS), released 27 September 2023, ONS website, methodology, [Sexual orientation Quality and Methodology Information](#)