

## Methodology

### The American Trends Panel survey methodology

#### Overview

The American Trends Panel (ATP), created by Pew Research Center, is a nationally representative panel of randomly selected U.S. adults. Panelists participate via self-administered web surveys. Panelists who do not have internet access at home are provided with a tablet and wireless internet connection. Interviews are conducted in both English and Spanish. The panel is being managed by Ipsos.

Data in this report is drawn from the panel wave conducted from July 5-17, 2022, and included [oversamples](#) of adults who identify as lesbian, gay or bisexual (LGB), adults who have used online dating sites or apps, and adults who are currently looking for a romantic partner, in order to provide more precise estimates of the opinions and experiences of these smaller demographic subgroups. These oversampled groups are weighted back to reflect their correct proportions in the population. A total of 6,034 panelists responded out of 7,374 who were sampled, for a response rate of 84%. This included 4,996 respondents from the ATP and an oversample of 1,038 LGB respondents from Ipsos' KnowledgePanel (KP). The cumulative response rate accounting for nonresponse to the recruitment surveys and attrition is 3%. The break-off rate among panelists who logged on to the survey and completed at least one item is 1%. The margin of sampling error for the full sample of 6,034 respondents is plus or minus 2.0 percentage points.

#### Panel recruitment

The ATP was created in 2014, with the first cohort of panelists invited to join the panel at the end of a large, national, landline and cellphone random-digit-dial (RDD) survey that was conducted in both English and Spanish. Two additional

#### American Trends Panel recruitment surveys

| Recruitment dates                                     | Mode                  | Invited       | Joined        | Active panelists remaining |
|---|-----------------------|---------------|---------------|----------------------------|
| Jan. 23 to March 16, 2014                             | Landline/<br>cell RDD | 9,809         | 5,338         | 1,593                      |
| Aug. 27 to Oct. 4, 2015                               | Landline/<br>cell RDD | 6,004         | 2,976         | 936                        |
| April 25 to June 4, 2017                              | Landline/<br>cell RDD | 3,905         | 1,628         | 470                        |
| Aug. 8 to Oct. 31, 2018                               | ABS                   | 9,396         | 8,778         | 4,420                      |
| Aug. 19 to Nov. 30, 2019                              | ABS                   | 5,900         | 4,720         | 1,618                      |
| June 1 to July 19, 2020;<br>Feb. 10 to March 31, 2021 | ABS                   | 3,197         | 2,812         | 1,692                      |
| May 29 to July 7, 2021<br>Sept. 16 to Nov. 1, 2021    | ABS                   | 1,329         | 1,162         | 931                        |
|   | <b>Total</b>          | <b>39,540</b> | <b>27,414</b> | <b>11,660</b>              |

Note: Approximately once per year, panelists who have not participated in multiple consecutive waves or who did not complete an annual profiling survey are removed from the panel. Panelists also become inactive if they ask to be removed from the panel.

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recruitments were conducted using the same method in 2015 and 2017, respectively. Across these three surveys, a total of 19,718 adults were invited to join the ATP, of whom 9,942 (50%) agreed to participate.

In August 2018, the ATP switched from telephone to address-based (ABS) recruitment. Invitations were sent to a stratified, random sample of households selected from the U.S. Postal Service's Delivery Sequence File. Sampled households receive mailings asking a randomly selected adult to complete a survey online. A question at the end of the survey asks if the respondent is willing to join the ATP. Starting in 2020 another stage was added to the recruitment. Households that do not respond to the online survey are sent a paper version of the questionnaire, \$5 and a postage-paid return envelope. A subset of the adults returning the paper version of the survey are invited to join the ATP. This subset of adults receive a follow-up mailing with a \$10 pre-incentive and invitation to join the ATP.

Across the four address-based recruitments, a total of 19,822 adults were invited to join the ATP, of whom 17,472 agreed to join the panel and completed an initial profile survey. In each household, the adult with the next birthday was asked to go online to complete a survey, at the end of which they were invited to join the panel. Of the 27,414 individuals who have ever joined the ATP, 11,660 remained active panelists and continued to receive survey invitations at the time this survey was conducted.

The U.S. Postal Service's Delivery Sequence File has been estimated to cover as much as 98% of the population, although some studies suggest that the coverage could be in the low 90% range.<sup>1</sup> The American Trends Panel never uses breakout routers or chains that direct respondents to additional surveys.

### **About the Ipsos KnowledgePanel**

The Ipsos KnowledgePanel is an online probability-based panel representative of the U.S. adult population. Households without internet connection are provided with a web-enabled device and free internet service. KnowledgePanel's recruitment process was originally based on a national RDD sampling methodology. In 2009, the panel switched to using an ABS methodology. Here is additional [information about the recruitment, sampling and weighting procedures](#) for the Ipsos KnowledgePanel.

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<sup>1</sup> AAPOR Task Force on Address-based Sampling. 2016. "[AAPOR Report: Address-based Sampling.](#)"

## **Sample design**

The overall target population for this survey was non-institutionalized persons ages 18 and older living in the U.S., including Alaska and Hawaii. It featured a stratified random sample from the ATP in which panelists who identify as lesbian, gay or bisexual, have used online dating sites or apps or who are currently looking for a romantic partner were selected with certainty. The remaining panelists were sampled at rates designed to ensure that the share of respondents in each stratum is proportional to its share of the U.S. adult population to the greatest extent possible. Respondent weights are adjusted to account for differential probabilities of selection as described in the Weighting section below.

The ATP was supplemented with an oversample of LGB respondents from the KnowledgePanel.

## **Questionnaire development and testing**

The questionnaire was developed by Pew Research Center in consultation with Ipsos. The web program was rigorously tested on both PC and mobile devices by the Ipsos project management team and Pew Research Center researchers. The Ipsos project management team also populated test data that was analyzed in SPSS to ensure the logic and randomizations were working as intended before launching the survey.

## **Incentives**

All respondents were offered a post-paid incentive for their participation. Respondents could choose to receive the post-paid incentive in the form of a check or a gift code to Amazon.com or could choose to decline the incentive. Incentive amounts ranged from \$5 to \$20 depending on whether the respondent belongs to a part of the population that is harder or easier to reach. Differential incentive amounts were designed to increase panel survey participation among groups that traditionally have low survey response propensities.

Ipsos operates an ongoing modest incentive program for KnowledgePanel to encourage participation and create member loyalty. The incentive program includes special raffles and sweepstakes with both cash rewards and other prizes to be won. Typically, panel members are assigned no more than one survey per week. On average, panel members complete two to three surveys per month with durations of 10 to 15 minutes per survey. An additional incentive is usually provided for longer surveys.

## Data collection protocol

The data collection field period for this survey was July 5-17, 2022. Postcard notifications were mailed to all ATP panelists with a known residential address on July 5, 2022.

Invitations were sent out in two separate launches: Soft Launch and Full Launch. Sixty ATP panelists and 456 KP panelists were included in the Soft Launch, which began with an initial invitation sent on July 5, 2022. The ATP panelists chosen for the initial Soft Launch were known responders who had completed previous ATP surveys within one day of receiving their invitation. All remaining English- and Spanish-speaking panelists were included in the Full Launch and were sent an invitation on July 6, 2022.

All panelists with an email address received an email invitation and up to four email reminders if they did not respond to the survey. All ATP panelists that consented to SMS messages received an SMS invitation and up to four SMS reminders.

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### Invitation and reminder dates

|                    | Soft Launch   | Full Launch   |
|--------------------|---------------|---------------|
| Initial invitation | July 5, 2022  | July 6, 2022  |
| First reminder     | July 9, 2022  | July 9, 2022  |
| Second reminder    | July 11, 2022 | July 11, 2022 |
| Third reminder     | July 13, 2022 | July 13, 2022 |
| Final reminder     | July 15, 2022 | July 15, 2022 |

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## Data quality checks

To ensure high-quality data, the Center's researchers performed data quality checks to identify any respondents showing clear patterns of satisficing. This includes checking for very high rates of leaving questions blank, as well as always selecting the first or last answer presented. As a result of this checking, two ATP respondents were removed from the survey dataset prior to weighting and analysis.

## Weighting

The data was weighted in a multistep process that accounts for multiple stages of sampling and nonresponse that occur at different points in the survey process. First, each panelist began with a base weight that reflects their probability of selection for their initial recruitment survey. These weights were then adjusted to account for each panelist's probability of being sampled to participate in this wave.

Next, respondents were placed into one of three groups: 1) LGB ATP respondents, 2) LGB KnowledgePanel respondents, or 3) all remaining ATP respondents. Within each group, the weights for each respondent were scaled to be proportional to that group's effective sample size.

The groups were then recombined, and the weights were poststratified so that the weighted proportion of LGB adults matched its estimated share of the of the U.S. adult population.

The weights were then calibrated to align with the population benchmarks identified in the accompanying table and trimmed at the 1st and 99th percentiles to reduce the loss in precision stemming from variance in the weights. Sampling errors and tests of statistical significance take into account the effect of weighting.

Some of the population benchmarks used for weighting come from surveys conducted prior to the coronavirus outbreak that began in February 2020. However, the weighting variables for panelists recruited in 2021 were measured at the time they were recruited to the panel. Likewise, the profile variables for existing panelists were updated from panel surveys conducted in July or August 2021. For KnowledgePanel respondents, many of the weighting variables were measured on this wave.

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### Weighting dimensions

| Variable   | Benchmark source                                      |
|--|---|
| Age x Gender   | 2019 American Community Survey (ACS)                  |
| Education x Gender   |   |
| Education x Age  |   |
| Race/Ethnicity x Education   |   |
| Born inside vs. outside the U.S. among Hispanics and Asian Americans |   |
| Years lived in the U.S.  |   |
| Census region x Metro/Non-metro                                      | 2020 CPS March Supplement                             |
| Voter registration   | 2018 CPS Voting and Registration Supplement           |
| Party affiliation  | 2021 National Public Opinion Reference Survey (NPORS) |
| Frequency of internet use  |   |
| Religious affiliation  |   |
| Volunteerism   | 2021 American Trends Panel Annual Profile Survey      |
| LGB Orientation  |   |

Note: Estimates from the ACS are based on non-institutionalized adults. Voter registration is calculated using procedures from Hur, Achen (2013) and rescaled to include the total U.S. adult population.

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This does not pose a problem for most of the variables used in the weighting, which are quite stable at both the population and individual levels. However, volunteerism may have changed over the intervening period in ways that made their 2021 measurements incompatible with the available (pre-pandemic) benchmarks. To address this, volunteerism is weighted to an estimated benchmark that attempts to account for possible changes in behavior.

The weighting parameter is estimated using the volunteerism profile variable that was measured on the full American Trends Panel in 2021 but weighted using the profile variable that was measured in 2020. For all other weighting dimensions, the more recent panelist measurements were used. For American Trends panelists recruited in 2021, the 2020 volunteerism measure was imputed using data from existing panelists with similar characteristics.

For panelists recruited in 2021, plausible values were imputed using the 2020 volunteerism values from existing panelists with similar characteristics. This ensures that any patterns of change that were observed in the existing panelists were also reflected in the new recruits when the weighting was performed.

The following table shows the unweighted sample sizes and the error attributable to sampling that would be expected at the 95% level of confidence for different groups in the survey.

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| <b>Group</b> | <b>Unweighted sample size</b> | <b>Plus or minus ...</b> |
|--------------|-------------------------------|--------------------------|
| Total sample | 6,034                         | 2.0 percentage points    |
| Men          | 2,741                         | 3.1 percentage points    |
| Women        | 3,203                         | 2.7 percentage points    |
| Ages 18-29   | 929                           | 5.4 percentage points    |
| 30-49        | 2,248                         | 3.4 percentage points    |
| 50-64        | 1,598                         | 3.9 percentage points    |
| 65+          | 1,241                         | 4.0 percentage points    |
| Single       | 2,231                         | 3.5 percentage points    |
| Looking      | 1,142                         | 5.1 percentage points    |
| Men          | 606                           | 7.1 percentage points    |
| Women        | 519                           | 7.1 percentage points    |
| Not looking  | 1,080                         | 4.9 percentage points    |

Note: This survey includes oversamples of lesbian, gay or bisexual (LGB) respondents, respondents who have used online dating sites or apps, and respondents who are currently looking for a romantic partner. Unweighted sample sizes do not account for the sample design or weighting and do not describe a group's contribution to weighted estimates. See the Sample design and Weighting sections above for details.

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Sample sizes and sampling errors for other subgroups are available upon request. In addition to sampling error, one should bear in mind that question wording and practical difficulties in conducting surveys can introduce error or bias into the findings of opinion polls.

**Dispositions and response rates**

| <b>Final dispositions</b>                                    | <b>AAPOR code</b> | <b>ATP</b>   | <b>KP</b>    | <b>Total</b> |
|--|-------------------|--------------|--------------|--------------|
| Completed interview  | 1.1               | 4,996        | 1,038        | 6,034        |
| Logged on to survey; broke-off                               | 2.12              | 31           | 28           | 59           |
| Logged on to survey; did not complete any items              | 2.1121            | 17           | 30           | 47           |
| Never logged on (implicit refusal)                           | 2.11              | 466          | 621          | 1,087        |
| Survey completed after close of the field period             | 2.27              | 2            | 1            | 3            |
| Completed interview but was removed for data quality         | 2.3               | 2            | 0            | 2            |
| Screened out   | 4.7               | 0            | 142          | 142          |
| <b>Total panelists in the survey</b>                         |                   | <b>5,514</b> | <b>1,860</b> | <b>7,374</b> |
| Completed interviews   | I                 | 4,996        | 1,038        | 6,034        |
| Partial interviews   | P                 |              |              |              |
| Refusals   | R                 | 516          | 28           | 544          |
| Non-contact  | NC                | 2            |              | 2            |
| Other  | O                 |              |              |              |
| Unknown household  | UH                |              |              |              |
| Unknown other  | UO                |              | 651          | 651          |
| Not eligible   | NE                |              |              |              |
| Screen out   | SO                |              | 143          | 143          |
| <b>Total</b>   |                   | <b>5,514</b> | <b>1,860</b> | <b>7,374</b> |
| Est. eligibility rate among unscreened: $e = (I+R)/(I+R+SO)$ |                   | 100%         | 88%          | 91%          |
| AAPOR RR1 = $I / (I+P+R+NC+O+UH+UO)$                         |                   | 91%          | 60%          | 83%          |
| AAPOR RR3 = $I / (I+R+[e*UO])$                               |                   | 91%          | 63%          | 84%          |

  

| <b>Cumulative response rate</b>   | <b>ATP</b> | <b>KP</b> | <b>Total</b> |
|---|------------|-----------|--------------|
| Weighted response rate to recruitment surveys   | 12%        | 10%       | 11%          |
| % of recruitment survey respondents who agreed to join the panel, among those invited | 69%        | 60%       | 67%          |
| % of those agreeing to join who were active panelists at start of Wave 111            | 43%        | 54%       | 46%          |
| Response rate to Wave 111 survey  | 91%        | 63%       | 84%          |
| <b>Cumulative response rate</b>   | <b>3%</b>  | <b>2%</b> | <b>3%</b>    |