

Methodology: Survey of U.S. adults

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 ATP Wave 135, conducted from Sept. 25 to Oct. 1, 2023, and includes an [oversample](#) of Hispanic men, non-Hispanic Black men and non-Hispanic Asian adults 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 8,842 panelists responded out of 9,577 who were sampled, for a response rate of 92%. 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 8,842 respondents is plus or minus 1.6 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 survey that was conducted in both English and Spanish. Two additional 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 sampling (ABS) recruitment. A study cover letter and a pre-incentive are mailed to a stratified, random sample of households selected from the U.S. Postal Service's Delivery Sequence File. This Postal Service 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.¹ Within each sampled household, the adult with the next birthday is asked to participate. Other details of the ABS recruitment protocol have changed over time but are available upon request.²

American Trends Panel recruitment surveys

Recruitment dates	Mode	Invited	Joined	Active panelists remaining
Jan. 23 to March 16, 2014	Landline/cell RDD	9,809	5,338	1,395
Aug. 27 to Oct. 4, 2015	Landline/cell RDD	6,004	2,976	833
April 25 to June 4, 2017	Landline/cell RDD	3,905	1,628	405
Aug. 8 to Oct. 31, 2018	ABS	9,396	8,778	3,853
Aug. 19 to Nov. 30, 2019	ABS	5,900	4,720	1,388
June 1 to July 19, 2020; Feb. 10 to March 31, 2021	ABS	3,197	2,812	1,441
May 29 to July 7, 2021; Sept. 16 to Nov. 1, 2021	ABS	1,329	1,162	732
May 24 to Sept. 29, 2022	ABS	3,354	2,869	1,462
April 17 to May 30, 2023	ABS	686	576	435
	Total	43,580	30,859	11,944

Note: RDD is random-digit dial; ABS is address-based sampling. 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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¹ AAPOR Task Force on Address-based Sampling. 2016. "AAPOR Report: Address-based Sampling."

² Email pewsurveys@pewresearch.org.

We have recruited a national sample of U.S. adults to the ATP approximately once per year since 2014. In some years, the recruitment has included additional effort (known as an “oversample”) to boost sample size with underrepresented groups. For example, Hispanic adults, Black adults and Asian adults were oversampled in 2019, 2022 and 2023, respectively.

Across the six address-based recruitments, a total of 23,862 adults were invited to join the ATP, of whom 20,917 agreed to join the panel and completed an initial profile survey. Of the 30,859 individuals who have ever joined the ATP, 11,944 remained active panelists and continued to receive survey invitations at the time this survey was conducted.

The American Trends Panel never uses breakout routers or chains that direct respondents to additional surveys.

Sample design

The overall target population for this survey was noninstitutionalized 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 Hispanic men, non-Hispanic Black men and non-Hispanic Asian adults 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.

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.

Data collection protocol

The data collection field period for this survey was Sept. 25 to Oct. 1, 2023. Postcard notifications were mailed to all ATP panelists with a known residential address on Sept. 25.

Invitations were sent out in two separate launches: soft launch and full launch. Sixty panelists were included in the soft launch, which began with an initial invitation sent on Sept. 25. The ATP panelists chosen for the initial soft launch were

Invitation and reminder dates, ATP Wave 135

	Soft launch	Full launch
Initial invitation	September 25, 2023	September 26, 2023
First reminder	September 28, 2023	September 28, 2023
Final reminder	September 30, 2023	September 30, 2023

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known responders who had completed previous ATP surveys within one day of receiving their invitation. All remaining English- and Spanish-speaking sampled panelists were included in the full launch and were sent an invitation on Sept. 26.

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

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, four ATP respondents were removed from the survey dataset prior to weighting and analysis.

Weighting

The ATP data is 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 begins with a base weight that reflects their probability of selection for their initial recruitment survey. These weights are then rescaled and adjusted to account for changes in the design of ATP recruitment surveys from year to year. Finally, the weights are calibrated to align with the population benchmarks in the accompanying table to correct for nonresponse to recruitment surveys and panel attrition. If only a subsample of panelists was invited to participate in the wave, this weight is adjusted to account for any differential probabilities of selection.

American Trends Panel weighting dimensions

Variable	Benchmark source
Age (detailed)	2021 American Community Survey (ACS)
Age x Gender	
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	2021 CPS March Supplement
Volunteerism	2021 CPS Volunteering & Civic Life Supplement
Voter registration	2018 CPS Voting and Registration Supplement
Party affiliation	2022 National Public Opinion Reference Survey (NPORS)
Frequency of internet use	
Religious affiliation	
<i>Additional weighting dimensions applied within Black adults</i>	
Age	2021 American Community Survey (ACS)
Gender	
Education	
Hispanic ethnicity	
Voter registration	2018 CPS Voting and Registration Supplement
Party affiliation	2022 National Public Opinion Reference Survey (NPORS)
Religious affiliation	

Note: Estimates from the ACS are based on noninstitutionalized 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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Among the panelists who completed the survey, this weight is then calibrated again 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.

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.

Sample sizes and margins of error, ATP Wave 135

Group	Unweighted sample size	Weighted %	Plus or minus ...
Total sample	8,842		1.6 percentage points
Rep/Lean Rep	4,033	46	2.2 percentage points
Dem/Lean Dem	4,507	48	2.2 percentage points

Note: This survey includes oversamples of Hispanic men, non-Hispanic Black men and non-Hispanic Asian adults. 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

Final dispositions, ATP Wave 135

	AAPOR code	Total
Completed interview	1.1	8,842
Logged on to survey; broke off	2.12	105
Logged on to survey; did not complete any items	2.1121	50
Never logged on (implicit refusal)	2.11	574
Survey completed after close of the field period	2.27	2
Completed interview but was removed for data quality		4
Screened out		0
Total panelists sampled for the survey		9,577
Completed interviews	I	8,842
Partial interviews	P	0
Refusals	R	729
Non-contact	NC	2
Other	O	4
Unknown household	UH	0
Unknown other	UO	0
Not eligible	NE	0
Total		9,577
AAPOR RR1 = I / (I+P+R+NC+O+UH+UO)		92%

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Cumulative response rate as of ATP Wave 135

	Total
Weighted response rate to recruitment surveys	11%
% of recruitment survey respondents who agreed to join the panel, among those invited	71%
% of those agreeing to join who were active panelists at start of Wave 135	46%
Response rate to Wave 135 survey	92%
Cumulative response rate	3%

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Methodology: Survey of U.S. teens

The analysis in this report is based on a self-administered web survey conducted from Sept. 26 to Oct. 23, 2023, among a sample of 1,453 dyads, with each dyad (or pair) comprised of one U.S. teen ages 13 to 17 and one parent per teen. The margin of sampling error for the full sample of 1,453 teens is plus or minus 3.2 percentage points. The survey was conducted by Ipsos Public Affairs in English and Spanish using KnowledgePanel, its nationally representative online research panel.

The research plan for this project was submitted to an external institutional review board (IRB), Advarra, which is an independent committee of experts that specializes in helping to protect the rights of research participants. The IRB thoroughly vetted this research before data collection began. Due to the risks associated with surveying minors, this research underwent a full board review and received approval (Approval ID Pro00073203).

KnowledgePanel members are recruited through probability sampling methods and include both those with internet access and those who did not have internet access at the time of their recruitment. KnowledgePanel provides internet access for those who do not have it and, if needed, a device to access the internet when they join the panel. KnowledgePanel's recruitment process was originally based exclusively on a national random-digit-dialing (RDD) sampling methodology. In 2009, Ipsos migrated to an address-based sampling (ABS) recruitment methodology via the U.S. Postal Service's Delivery Sequence File (DSF). The 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.⁴

Panelists were eligible for participation in this survey if they indicated on an earlier profile survey that they were the parent of a teen ages 13 to 17. A random sample of 3,981 eligible panel members were invited to participate in the study. Responding parents were screened and considered qualified for the study if they reconfirmed that they were the parent of at least one child ages 13 to 17 and granted permission for their teen who was chosen to participate in the study. In households with more than one eligible teen, parents were asked to think about one randomly selected teen, and that teen was instructed to complete the teen portion of the survey. A survey was considered complete if both the parent and selected teen completed their portions of the questionnaire, or if the parent did not qualify during the initial screening.

Of the sampled panelists, 1,763 (excluding break-offs) responded to the invitation and 1,453 qualified, completed the parent portion of the survey, and had their selected teen complete the teen portion of the survey, yielding a final stage completion rate of 44% and a qualification rate of

⁴ AAPOR Task force on Address-based Sampling. 2016. "[AAPOR Report: Address-based Sampling.](#)"

82%. The cumulative response rate accounting for nonresponse to the recruitment surveys and attrition is 2.2%. The break-off rate among those who logged on to the survey (regardless of whether they completed any items or qualified for the study) is 26.9%.

Upon completion, qualified respondents received a cash-equivalent incentive worth \$10 for completing the survey. To encourage response from non-Hispanic Black panelists, the incentive was increased from \$10 to \$20 on Oct. 5, 2023. The incentive was increased again on Oct. 10, from \$20 to \$40; then to \$50 on Oct. 17; and to \$75 on Oct. 20. Reminders and notifications of the change in incentive were sent for each increase.

All panelists received email invitations and any nonresponders received reminders, shown in the table. The field period was closed on Oct. 23, 2023.

Invitation and reminder dates

Invitation	Sept. 26, 2023
First reminder	Sept. 28, 2023
Second reminder	Oct. 2, 2023

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Weighting

The analysis in this report was performed using separate weights for parents and teens.

The parent weight was created in a multistep process that begins with a base design weight for the parent, which is computed to reflect their probability of selection for recruitment into the

KnowledgePanel. These selection probabilities were then adjusted to account for the probability of selection for this survey which included

oversamples of Black and Hispanic parents. Next, an iterative technique was used to align the parent design weights to population benchmarks for parents of teens ages 13 to 17 on the dimensions identified in the accompanying table, to account for any differential nonresponse that may have occurred.

Weighting dimensions

Variable	Benchmark source
Age x Gender	2023 March Supplement of the Current Population Survey (CPS)
Race/Ethnicity	
Census region	
Metropolitan status	
Education (parents only)	
Household income	
Household income x Race/Ethnicity	
Total household size	

Language proficiency	2021 American Community Survey (ACS)
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Note: Estimates from the ACS are based on noninstitutionalized adults.

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To create the teen weight, an adjustment factor was applied to the final parent weight to reflect the selection of one teen per household. Finally, the teen weights were further raked to match the demographic distribution for teens ages 13 to 17 who live with parents. The teen weights were adjusted on the same teen dimensions as parent dimensions with the exception of teen education, which was not used in the teen weighting.

Sampling errors and tests of statistical significance take into account the effect of weighting. Interviews were conducted in both English and Spanish.

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.

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:

Group	Unweighted sample size	Weighted %	Plus or minus ...
Teens (ages 13-17)	1,453		3.2 percentage points
Rep/Lean Rep	588	43	4.9 percentage points
Dem/Lean Dem	704	47	4.6 percentage points

Note: This survey includes oversamples of Black and Hispanic respondents. Unweighted sample sizes do not account for the sample design or weighting and do not describe a group's contribution to weighted estimates. Refer to the Weighting section for details.

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Sample sizes and sampling errors for subgroups are available upon request.

Dispositions and response rates

The tables below display dispositions used in the calculation of completion, qualification and cumulative response rates.⁵

Dispositions	
Total panelists assigned	3,981
Total study completes (including nonqualified)	1,763
Number of qualified completes	1,453
Number of study break-offs	647
Study Completion Rate (COMPR)	44.2%
Study Qualification Rate (QUALR)	82%
Study Break-off Rate (BOR)	26.9%
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Cumulative response rate calculations	
Study-Specific Average Panel Recruitment Rate (RECR)	8.8%
Study-Specific Average Household Profile Rate (PROR)	57.2%
Study-Specific Average Household Retention Rate (RETR)	35.4%
Cumulative Response Rate	2.2%
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⁵ For more information on this method of calculating response rates, refer to Callegaro, Mario, and Charles DiSogra. 2008. [“Computing response metrics for online panels.”](#) Public Opinion Quarterly.