

2021 National Public Opinion Reference Survey

Methodology

Summary

Ipsos conducted the National Public Opinion Reference Survey (NPORS) for Pew Research Center using address-based sampling and a multimode protocol. The survey was fielded May 29, 2021, to August 25, 2021. Participants were first mailed an invitation to complete an online survey. A paper survey was later mailed to those who did not respond. In total, 1,550 respondents completed the survey online and 2,387 respondents completed the paper survey. The survey was administered in English and Spanish.¹ The AAPOR Response Rate 1 was 29%.

Sample definition

The sample was drawn from the U.S. Postal Service Computerized Delivery Sequence File (DSF) and was provided by MSG (Marketing Systems Group). Occupied residential addresses (including “drop points”) in all U.S. states (including Alaska and Hawaii) and the District of Columbia had a nonzero chance of selection. The draw was a national, stratified random sample, with differential probabilities of selection across the mutually exclusive strata. Ipsos designed the sample plan with the goal of obtaining in the recruited panel the distribution of age-by-race groups shown in the table to the right.

1	Hispanic adult ages 18-24	2.0%
2	Hispanic adult ages 25+	12.0%
3	Black adult ages 18-24	1.5%
4	Black adult ages 25+	9.5%
5	Other 18-24 (non-Hispanic, non-Black)	4.0%
6	High school or less (any age, ethnicity)	20.0%
7	All other adults ages 25+	<u>51.0%</u>
	Total	100%

Mailing protocol

Ipsos sent initial mailings in a 9-by-12-inch envelope via First-Class mail to the 13,500 sampled households. These packets included two \$1 bills and a letter asking a member of the household to complete an online survey using the website and password provided. If two or more adults were in the household, the letter asked the adult with the next birthday to complete the survey. Sampled households were later sent a reminder postcard and then a reminder letter via first class mail.

Ipsos sent nonresponding households with a deliverable address a 9-by-12-inch Priority mail envelope. The Priority envelope contained a letter, \$5 bill, a paper version of the survey and a postage-paid return envelope. The paper survey was one 11-by-17-inch page folded booklet-style.

¹ The online component was used to recruit members to Pew Research Center’s national probability-based American Trends Panel, but the NPORS survey includes all completed interviews regardless of whether they were asked to join or agreed to join the panel.

The within-household selection instructions were identical to those used in the earlier online survey request. These households were later sent a reminder postcard.

Households in Hispanic strata received all materials in English and Spanish. All other households received materials in English only. Those who completed the survey online or returned the completed paper survey were sent a \$10 post-incentive.

Questionnaire development and testing

Pew Research Center developed the questionnaire in consultation with Ipsos. The online questionnaire was tested on both desktop and mobile devices. The test data was analyzed to ensure the logic and randomizations were working as intended before the survey was launched.

The online questionnaire contains more questions than the paper questionnaire because a subset of respondents to the online survey were eventually asked if they were willing to join the American Trends Panel. More information is needed about adults who join the panel. The NPORS sample, however, includes all adults completing the online or paper questionnaire regardless of whether they agreed to join the panel. The NPORS dataset contains only the questions measured both on paper and online.

Weighting

The survey was weighted to support reliable inference from the sample to the target population of U.S. adults. The weight was created using a multistep process that includes a base weight adjusting for differential probabilities of selection and a raking calibration that aligns the survey with the population benchmarks. The process starts with the base weight, which accounted for the probability of selection of the address from the U.S. Postal Service Computerized Delivery Sequence File frame, as well as the number of adults living in the household.

Then the base weights are calibrated to population benchmarks using raking, or iterative proportional fitting. The raking dimensions and the source for the population parameter estimates are reported in the table below. All raking targets are based on the non-institutionalized U.S. adult population (ages 18 and older). These weights are trimmed at about the 1st and 99th percentiles to reduce the loss in precision stemming from variance in the weights.

Raking dimensions and source for population parameter estimates

Raking dimension [^]	Source
Gender(2) x Age(6)	2019 American Community Survey
Gender(2) x Education(3)	2019 American Community Survey
Age(3) x Education(3)	2019 American Community Survey
Education(3) x Race/ethnicity(4)*	2019 American Community Survey
Race/ethnicity(4) x Born inside or outside the U.S.(2)*	2019 American Community Survey
Census Region(4) by Metro Status(2)	2020 Current Population Survey ASEC March Supplement
Voter Registration(2) [^]	2018 Current Population Survey Voting and Registration Supplement

[^] Voter registration is calculated using procedures from Hur, Achen (2013) and rescaled to include the total US adult population.

* Education and born inside or outside the U.S. are collapsed for "Other/Non-Hispanic"

Design effect and margin of error

Weighting and survey design features that depart from simple random sampling tend to result in an increase in the variance of survey estimates. This increase, known as the design effect, or "deff," should be incorporated into the margin of error, standard errors and tests of statistical significance. The overall design effect for a survey is commonly approximated as 1 plus the squared coefficient of variation of the weights. For this survey, the margin of error (half-width of the 95% confidence interval) incorporating the design effect for full sample estimates at 50% is plus or minus 2.1 percentage points. Estimates based on subgroups will have larger margins of error. It is important to remember that random sampling error is only one possible source of error in a survey estimate. Other sources, such as question wording and reporting inaccuracy, may contribute additional error. A summary of the weights and their associated design effect is reported in the table below.

Weight variable	Completed interviews	Approximate design effect	Effective sample size	Margin of error (95% confidence level)
WEIGHT	3,937	1.89	2,083	±2.1

Dispositions

The table below reports the disposition of all sampled households for the survey.

Final dispositions and rates	Code	Cases
Interview		
Complete	1.0/1.10	3,937
Partial	1.2	65
Eligible, non-interview		
Refusal	2.11	31
Unknown eligibility, non-interview		
Nothing returned	3.19	8,809
USPS: Refused to accept	3.231	24
USPS: Insufficient address on mail from one post office to another post office	3.252	24
USPS: No mail receptacle	3.253	38
USPS: Undeliverable as addressed	3.310	2
USPS: Attempted – addressee not known at place of address	3.311	38
USPS: No such number	3.3131	31
USPS: No such street	3.3133	2
USPS: Vacant	3.3134	327
USPS: Unable to forward, not deliverable as addressed	3.3141	147
USPS: Temporarily away, holding period expired	3.34	3
USPS: Unclaimed – failure to call for held mail	3.35	13
Not eligible		
No eligible respondent	4.70	9
Total sample used		13,500
Complete interviews (1.1)	I	3,937
Partial interviews (1.2)	P	65
Refusal (2.1)	R	31
Unknown household (3.1)	UH	8,809
Unknown other (3.2-3.9)	UO	649
TOTAL		13,491
AAPOR RR3 = $1/((I+P) + (R+NC+O) + e(UH+UO))$		29%
AAPOR COOP1 = $1/(I+P)+R+O$		98%
AAPOR REF2 = $R/((I+P)+(R+NC+O) + e(UH + UO))$		<1%
AAPOR CON2 = $(I+P)+R+O / (I+P)+R+O+NC + e(UH+UO)$		30%
CONTACT x COOP		29%