Annenberg Survey of Attitudes on Public Health (ASAPH)

Methods Report for the Annenberg Public Policy Center

ASAPH National Survey Wave 13.1

ssrs
redefining research

Table of Contents

Overview

The Annenberg Public Policy Center of the University of Pennsylvania (APPC) engaged SSRS to conduct the 13.1 wave of the Annenberg Survey of Attitudes on Public Health (ASAPH) National Survey. This wave focused on climate change. The survey was conducted via the SSRS Opinion Panel and invited U.S. adults aged 18 and older who completed the ASAPH Wave 1 survey, or who were recruited in ASAPH Wave 9 or the ASAPH Engagement Survey, to participate. Only panelists who previously reported NOT being a member of other U.S. opinion panels were invited. The sample size was *n* = 1,975.

Data collection was conducted from November 14 – November 20, 2023 on 1,538 respondents in English (1,512) and Spanish (26). There were 1,502 web respondents and 36 telephone respondents. Data were weighted to represent the U.S. adult population. This report provides information about the sampling procedures and the methods used to collect, process, and weight data for ASAPH National Survey Wave 13.1.

Questionnaire Design

The questionnaire was developed by APPC in consultation with the SSRS project team. SSRS reviewed the questionnaire primarily to identify potential problems in the instrument that might increase respondent burden, cause respondents to refuse or terminate the interview, create problems with respondent comprehension, or pose practical challenges for mode-specific administration such as complex skip patterns. The questionnaire was translated into Spanish so respondents could choose to take the survey in English or Spanish based on their preference. Prior to the field period, SSRS programmed the study into its Forsta Plus (formerly known as Confirmit) platform that allows data to be collected online or through Computer Assisted Telephone Interviewing (CATI). Extensive checking of the program was conducted to ensure that skip patterns and sample splits followed the design of the questionnaire.

Sample Design: The SSRS Opinion Panel

SSRS Opinion Panel members are recruited randomly based on nationally representative ABS (Address Based Sample) design (including Hawaii and Alaska). ABS respondents are randomly sampled by Marketing Systems Group (MSG) through the U.S. Postal Service's Computerized Delivery Sequence File (CDS), a regularly updated listing of all known addresses in the U.S. For the SSRS Opinion Panel, known business addresses are excluded from the sample frame.[1]

---

[1] Prior to July 2019, the SSRS Opinion Panel was recruited entirely from RDD sample.

The SSRS Opinion Panel is a multi-mode panel. Internet households participate via web while all non-internet households (including those who have internet but are unwilling to take surveys online) participate via phone.

Data Collection

Survey Sampling

The sample for the ASAPH National Survey Wave 13.1 consisted of n=1,975 SSRS Opinion Panelists who were recruited to the ASAPH panel through the Wave 1, Wave 9 or Engagement surveys and were not members of other U.S. opinion panels. The sample from Wave 1 was stratified by age, gender, race and ethnicity, education, region, party identification and language to ensure adequate representation of each. Sample recruited from Wave 9 or the Engagement Survey were SSRS Opinion Panelists who indicated their educational attainment was a high school degree or less.

Survey Administration Procedures

A "soft launch" inviting a limited number of panelists to participate was conducted on the morning of November 14, 2023. After checking soft launch data to ensure that all questionnaire content and skip patterns were correct, the remaining sample was released on the afternoon of November 14, 2023.

Web panelists were emailed an invitation to complete the survey online. The email for each respondent included a unique passcode-embedded link. All web panelists not responding to their first invitation received up to four reminder emails and non-responding web panelists who had opted to receive text messages from the SSRS Opinion Panel received up to two text message reminders.

In appreciation for their participation, web panelists received a $15 incentive in the form of an electronic gift card. Telephone respondents received a $15 incentive in the form of a mailed check.

Median survey length was 19.1 minutes online and 35.6 minutes by phone.

Quality Control Checks

For web surveys, quality checks were incorporated into the survey. For APPC National Survey Wave 13.1, SSRS built in three closed-ended trap questions to the web version of the program. Respondents who failed the quality checks were not included in the final data set. This included:

1. Respondents who answered two or more trap questions incorrectly (*n*=1).
2. Respondents with a length of interview (LOI) less than 20% of the overall median LOI[2] (*n*=8).
3. Respondents who skipped more than 10% of the questions asked[3] (*n*=2).

A total of *N*=11 completed surveys were removed (0.7%).[4]

For telephone surveys, interviews were closely monitored by interviewing staff and project staff for quality control. In addition, select recordings were reviewed by supervisors to monitor quality and interviewer procedures.

Data Processing and Integration

Data from web and telephone modes were combined and thoroughly cleaned with a computer validation program written by one of SSRS's data processing programmers. This program established editing parameters in order to locate any errors, including data that did not follow skip patterns, out of range values, and errors in data field locations. No back-coding or code development was done.

Completion Rate/Response Rate

Table 1 details the survey completion rate for this study.

Table 1: Completion Rate/Response Rate

Touchpoint	Web	Telephone	Overall
Invited to Participate/Total Sample	1,898	77	1,975
Completed[5]	1,502	36	1,538
Survey Completion Rate	79.1%	46.7%	77.9%

---

[2] LOI less than 3.8 minutes.
[3] 98.6% of respondents answered 100% of questions asked.
[4] Panelists may fail multiple quality control checks; therefore, the total number of removals may be less than the cumulative number of failed tests.
[5] Excludes cases removed for quality control reasons.

Weighting Methods

Data were weighted to represent the residential adult population of the United States. The data were weighted by applying a base weight and balancing the demographic profile of the sample to target population parameters. Data were weighted using two sets of benchmarks: one weight (weight_old) was created using benchmarks that had been used in the last ASAPH wave (wave 13). Most benchmarks used to create weight_old were from 2022. Another weight (weight_new) was created using updated benchmarks released in October of 2023 for some parameters. Most benchmarks used to create weight_new dated from 2023.

Base weight (BW)

The final weight for Wave 1 was used as the base weight for the main sample respondents. For the low-education respondents added in Wave 9, their final weight from Wave 9 was used as the base weight. For the additional low-education respondents added from the Engagement Survey, their final weights from Wave 10 were used as the base weight. The base weight for each panelist was the same for weight_old and weight_new.

Probability-Panel Weighting

With the base weight applied, the data were weighted to balance the demographic profile of the sample to the target population parameters.

Missing data in the raking variables were imputed using hot decking. Hot deck imputation replaces the missing values of a respondent randomly with another similar respondent without missing data. Hot decking was done using an SPSS macro detailed in 'Goodbye, Listwise Deletion: Presenting Hot Deck Imputation as an Easy and Effective Tool for Handing Missing Data' (Myers, 2011).

Weighting was accomplished using SPSSINC RAKE, an SPSS extension module that simultaneously balances the distributions of all variables using the GENLOG procedure.

Older Benchmarks (WEIGHT_OLD)

For the weighting method using the 2022 NPORS and CPS benchmarks (weight_old), data were weighted to distributions of: sex by age, sex by education, age by education, race/ethnicity, census region, civic engagement, population density, party ID[6], voter registration, religious affiliation, and internet-use frequency. The main demographic benchmarks were obtained from the 2022 Annual

---

[6] The party ID used in weighting was measured in 2022, not at the time of this survey.

Social and Economic Supplement (ASEC) of Current Population Survey (CPS)[7]. The civic engagement benchmark was derived from September 2021 CPS Volunteering and Civic Life Supplement data[8][9]. Population density was derived from the Claritas Pop-Facts Premier 2023[10]. The registered voter benchmark is from Aristotle Voter Data 2023 and Annual Estimates of the Resident Population by Single Year of Age and Sex for the United States: April 1, 2020 to July 2, 2022 from the U.S. Census Bureau[11]. The party ID, internet frequency, and religious affiliation benchmarks came from the 2022 NPORS annual dataset released by Pew Research Center[12]. The table in Appendix I compares unweighted and weighted sample distributions to target population benchmarks.

New Benchmarks (WEIGHT_NEW)

For the weighting method using the recently released 2023 NPORS and CPS benchmarks (weight_new), data were weighted to distributions of: sex by age, sex by education, age by education, race/ethnicity, census region, civic engagement, population density, party ID[13], voter registration, religious affiliation, and internet-use frequency. The main demographic benchmarks were obtained from the 2023 Annual Social and Economic Supplement (ASEC) of Current Population Survey (CPS)[14]. The civic engagement benchmark was derived from September 2021 CPS Volunteering and Civic Life Supplement data[15][16]. Population density was derived from the Claritas Pop-Facts Premier 2023[17]. The registered voter benchmark is from Aristotle Voter Data 2023 and Annual Estimates of the Resident Population by Single Year of Age and Sex for the United States: April 1, 2020 to July 2, 2022 from the U.S. Census Bureau[18]. The party ID, internet frequency, and religious affiliation benchmarks came from the 2023 NPORS annual dataset released by Pew Research Center[19]. The table in Appendix II compares unweighted and weighted sample distributions to target population benchmarks.

---

[7] Sarah Flood, Miriam King, Renae Rodgers, Steven Ruggles, J. Robert Warren and Michael Westberry. Integrated Public Use Microdata Series, Current Population Survey: Version 10.0 2022 ASEC. Minneapolis, MN: IPUMS, 2022. https://doi.org/10.18128/D030.V10.0.

[8] https://www.census.gov/programs-surveys/cps/about/supplemental-surveys.html

[9] Civically engaged respondents are defined as those who have volunteered in the past 12 months or who talk to their neighbors daily.

[10] https://environicsanalytics.com/data/demographic/pop-facts-premier.

[11] https://www.census.gov/data/tables/time-series/demo/popest/2020s-national-detail.html

[12] https://www.pewresearch.org/methods/fact-sheet/national-public-opinion-reference-survey-npors/ - May 23 to Sept 6, 2022.

[13] The party ID used in weighting was measured in August 2023, not at the time of this survey.

[14] Sarah Flood, Miriam King, Renae Rodgers, Steven Ruggles, J. Robert Warren, Daniel Backman, Annie Chen, Grace Cooper, Stephanie Richards, Megan Schouweiler and Michael Westberry. IPUMS CPS: Version 11.0 [dataset]. Minneapolis, MN: IPUMS, 2023. https://doi.org/10.18128/D030.V11.0

[15] https://www.census.gov/programs-surveys/cps/about/supplemental-surveys.html

[16] Civically engaged respondents are defined as those who have volunteered in the past 12 months or who talk to their neighbors daily.

[17] https://environicsanalytics.com/data/demographic/pop-facts-premier.

[18] https://www.census.gov/data/tables/time-series/demo/popest/2020s-national-detail.html

[19] https://www.pewresearch.org/methods/fact-sheet/national-public-opinion-reference-survey-npors/ - May 19 to Sept 5, 2023.

Trimming

Weights were trimmed at the 4th and 96th percentiles for weight_old and at the 2nd and 98th percentiles for weight_new to prevent individual interviews from having too much influence on survey-derived estimates. Appendices I and II below compare unweighted and weighted sample distributions to target population benchmarks for weight_old and weight_new, respectively.

Effects of Sample Design on Statistical Inference

Post-data collection statistical adjustments require analysis procedures that reflect departures from simple random sampling. SSRS calculates the effects of these design features so that an appropriate adjustment can be incorporated into tests of statistical significance when using these data. The so-called "design effect" or deff represents the loss in statistical efficiency that results from a disproportionate sample design and systematic non-response. The total sample design effect for this survey is 1.97 for weight_old and 1.73 for weight_new.

SSRS calculates the composite design effect for a sample of size n, with each case having a weight, w, as:[20]

$$deff = \frac{n \sum w^2}{(\sum w)^2}$$

The survey's margin of error is the largest 95% confidence interval for any estimated proportion based on the total sample — the one around 50%. For example, the margin of error for the entire sample for weight_old is ± 3.5 percentage points and for weight_new is ± 3.3 percentage points. This means that in 95 out of every 100 samples drawn using the same methodology, estimated proportions based on the entire sample will be no more than 3.5 and 3.3 percentage points away from their true values in the population for weight_old and weight_new, respectively, respectively.

Margins of error for subgroups will be larger. It is important to remember that sampling fluctuations are only one possible source of error in a survey estimate. Other sources, such as respondent selection bias, questionnaire wording, and reporting inaccuracy, may contribute additional error of greater or lesser magnitude.

---

[20] Kish, L. (1992). Weighting for Unequal Pi. Journal of Official Statistics, Vol. 8, No.2, 1992, pp. 183-200.

Deliverables

Final deliverables for this study are as follows:

- Weighted SPSS dataset
- Weighted SPSS dataset for Waves 1-13.1
- Methods Report

About SSRS

SSRS is breaking the mold on what research companies can do. A full-service market and survey research firm, we use the latest data collection best practices and apply cutting-edge survey methodologies backed by insight from our industry-leading team. We have genuine enthusiasm for our work and a shared goal to connect people through research. Our solutions include groundbreaking approaches fit for purpose: the SSRS Opinion Panel, Encipher, SSRS Virtual Insights, the SSRS Text Message panel, and more. Our research areas focus on Health Care and Health Policy, Public Opinion and Policy, Political and Election Polling, Consumer and Lifestyle, and Sports and Entertainment. Visit www.ssrs.com to learn more about how we can work together.

Appendix I: Sample Demographics for WEIGHT_OLD

Category	Values	Parameter	Unweighted	Weighted
Sex by age	Male 18-24	5.7%	1.2%	4.1%
	Male 25-34	8.7%	7.1%	9.0%
	Male 35-44	8.5%	8.8%	9.0%
	Male 45-54	7.8%	8.2%	8.2%
	Male 55-64	8.1%	8.4%	8.2%
	Male 65+	10.0%	15.3%	10.4%
	Female 18-24	5.6%	1.4%	3.9%
	Female 25-34	8.7%	9.1%	9.1%
	Female 35-44	8.5%	10.5%	9.2%
	Female 45-54	7.9%	7.9%	8.2%
	Female 55-64	8.5%	10.4%	8.9%
	Female 65+	12.0%	11.7%	11.8%
Sex by education	Male HS grad or less	20.1%	8.6%	18.8%
	Male Some college	12.5%	12.2%	12.5%
	Male College grad +	16.2%	28.2%	17.6%
	Female HS grad or less	18.6%	12.7%	17.8%
	Female Some college	14.0%	15.2%	14.2%
	Female College grad +	18.6%	23.1%	19.2%
Age by education	18-34 HS grad or less	11.5%	4.6%	9.7%
	18-34 Some college	8.7%	3.8%	7.6%
	18-34 College grad +	8.6%	10.3%	8.7%
	35-54 HS grad or less	11.3%	7.3%	11.9%
	35-54 Some college	7.8%	9.6%	8.4%
	35-54 College grad +	13.6%	18.5%	14.4%
	55+ HS grad or less	16.0%	9.4%	15.0%
	55+ Some college	9.9%	14.0%	10.6%
	55+ College grad +	12.6%	22.5%	13.7%

Table continued on next page...

Category	Values	Parameter	Unweighted	Weighted
Race/ethnicity	White non-Hispanic	62.0%	67.6%	63.4%
	Black non-Hispanic	12.0%	9.4%	12.2%
	Hispanic, US Born	8.2%	8.1%	8.1%
	Hispanic, Foreign-Born	8.9%	4.6%	7.8%
	Asian, non-Hispanic	6.3%	8.3%	6.0%
	Other non-Hispanic	2.5%	2.1%	2.6%
Census region	Northeast	17.4%	19.0%	18.3%
	Midwest	20.6%	18.3%	19.7%
	South	38.3%	37.0%	37.6%
	West	23.7%	25.6%	24.4%
Civic engagement	Not engaged	73.0%	55.6%	72.6%
	Civically engaged	27.0%	44.4%	27.4%
Population density	1 Lowest 20%	20.0%	16.3%	19.3%
	2	20.0%	21.1%	19.9%
	3	20.0%	21.7%	20.7%
	4	20.0%	21.5%	20.4%
	5 Highest 20%	20.0%	19.4%	19.7%
Party ID (panel)	Rep	30.1%	23.4%	29.3%
	Dem	29.2%	34.3%	30.0%
	Ind/Other	40.8%	42.3%	40.6%
Voter Registration	Registered to vote	76.6%	86.1%	78.4%
	Not registered	23.4%	13.9%	21.6%
Religion	Affiliated	68.6%	71.1%	68.3%
	Not Affiliated	31.4%	28.9%	31.7%
Internet Frequency	Almost constantly	42.9%	50.7%	44.0%
	Several times a day	43.1%	41.0%	43.5%
	About once a day	5.1%	4.9%	5.4%
	Several times a week	3.6%	1.8%	3.0%
	Less often	2.3%	1.2%	2.3%
	Not an internet user	3.0%	0.5%	1.8%

Appendix II: Sample Demographics for WEIGHT_NEW

Category	Values	Parameter	Unweighted	Weighted
Sex by age	Male 18-24	6.0%	1.2%	4.5%
	Male 25-34	8.8%	7.1%	9.1%
	Male 35-44	8.5%	8.8%	8.9%
	Male 45-54	7.7%	8.2%	8.1%
	Male 55-64	7.8%	8.4%	8.1%
	Male 65+	10.2%	15.3%	10.3%
	Female 18-24	5.8%	1.4%	4.9%
	Female 25-34	8.6%	9.1%	9.0%
	Female 35-44	8.4%	10.5%	8.8%
	Female 45-54	7.8%	7.9%	8.2%
	Female 55-64	8.2%	10.4%	8.5%
	Female 65+	12.2%	11.7%	11.6%
Sex by education	Male HS grad or less	20.0%	8.6%	19.0%
	Male Some college	12.4%	12.2%	12.7%
	Male College grad +	16.5%	28.2%	17.3%
	Female HS grad or less	18.2%	12.7%	17.3%
	Female Some college	14.0%	15.2%	14.1%
	Female College grad +	18.9%	23.1%	19.7%
Age by education	18-34 HS grad or less	11.5%	4.6%	10.1%
	18-34 Some college	8.8%	3.8%	8.2%
	18-34 College grad +	8.9%	10.3%	9.2%
	35-54 HS grad or less	10.9%	7.3%	11.4%
	35-54 Some college	7.8%	9.6%	8.2%
	35-54 College grad +	13.7%	18.5%	14.3%
	55+ HS grad or less	15.7%	9.4%	14.7%
	55+ Some college	9.9%	14.0%	10.4%
	55+ College grad +	12.8%	22.5%	13.4%

Table continued on next page...

Category	Values	Parameter	Unweighted	Weighted
Race/ethnicity	White non-Hispanic	61.3%	67.6%	61.9%
	Black non-Hispanic	12.1%	9.4%	12.4%
	Hispanic, US Born	8.4%	8.1%	8.0%
	Hispanic, Foreign-Born	9.1%	4.6%	8.4%
	Asian, non-Hispanic	6.5%	8.3%	6.7%
	Other non-Hispanic	2.6%	2.1%	2.6%
Census region	Northeast	17.3%	19.0%	17.9%
	Midwest	20.5%	18.3%	20.2%
	South	38.6%	37.0%	37.3%
	West	23.6%	25.6%	24.6%
Civic engagement	Not engaged	73.0%	55.6%	72.4%
	Civically engaged	27.0%	44.4%	27.6%
Population density	1 Lowest 20%	20.0%	16.3%	20.4%
	2	20.0%	21.1%	19.5%
	3	20.0%	21.7%	20.1%
	4	20.0%	21.5%	19.8%
	5 Highest 20%	20.0%	19.4%	20.3%
Party ID (panel)	Rep	29.0%	23.4%	27.9%
	Dem	30.4%	34.3%	31.3%
	Ind/Other	40.7%	42.3%	40.7%
Voter Registration	Registered to vote	76.6%	86.1%	78.2%
	Not registered	23.4%	13.9%	21.8%
Religion	Affiliated	71.0%	71.1%	70.4%
	Not Affiliated	29.0%	28.9%	29.6%
Internet Frequency	Almost constantly	41.9%	50.7%	42.7%
	Several times a day	44.1%	41.0%	44.7%
	About once a day	5.3%	4.9%	5.4%
	Several times a week	2.8%	1.8%	2.8%
	Less often	2.2%	1.2%	2.3%
	Not an internet user	3.6%	0.5%	2.1%