

SSRS OMNIBUS
NATIONAL DUAL-FRAME
TELEPHONE OMNIBUS SURVEY
METHODOLOGY
FLOOD PREPAREDNESS SURVEY
FEBRUARY 11-16

2020



This study was conducted for Pew Charitable Trusts via telephone by SSRS on its Omnibus survey platform. The SSRS Omnibus is a national, weekly, dual-frame bilingual telephone survey. Interviews were conducted from February 11 – 16, 2020 among a sample of 800 respondents in English (767) and Spanish (33). Telephone interviews were conducted by landline (246) and cell phone (554, including 359 without a landline phone). The margin of error with design effect for total respondents is +/-3.9% at the 95% confidence level. All SSRS Omnibus data are weighted to represent the target population.

	N	Margin of Error	Design Effect
Total	800	+/- 3.9%	1.28

Sample Design

The SSRS Omnibus sample is designed to represent the adult U.S. population. The SSRS Omnibus uses a fully-replicated, stratified, single-stage, random-digit-dialing (RDD) sample of landline telephone households, and randomly generated cell phone numbers. Sample telephone numbers are computer-generated and loaded into on-line sample files accessed directly by the computer-assisted telephone interviewing (CATI) system.

Respondent Selection

Within each landline household, a single respondent is selected through the following selection process: First, interviewers ask to speak with the youngest adult male or female at home based on a random rotation. If there are no men/women at home during that time, interviewers ask to speak with the youngest adult female/male at home.

Cell phones are treated as individual devices and the interview may take place outside the respondent's home; therefore, cell phone interviews are conducted with the person answering the phone.

Four out of every five respondents were randomly selected to participate in the flood preparedness survey for a total of 800 interviews.

Field Procedures

Interviewing for each SSRS Omnibus survey is conducted over a six-day period, typically from Tuesday through Sunday, thus including weekdays and weekends. Each wave of SSRS Omnibus is composed of two distinct parts. The first is a series of inserts contracted by our clients; these inserts may range from a single, closed-ended, question to a twenty-minute battery of open and closed-ended questions. Our staff reviews each insert to ensure that the questions, as worded, will provide clients with the desired information. Clients are given exclusivity for their subject area and inserts may be randomized to reduce bias. Typically, tracking studies are given preference, in terms of placement, within the composite survey.

The Flood Preparedness insert was designed collaboratively by the Pew Charitable Trust and SSRS teams. SSRS provided input on questionnaire design and feedback regarding question wording, order, clarity, and

other issues pertaining to questionnaire quality. Together, SSRS and the Pew teams worked to finalize the questionnaire.

The second part of the SSRS Omnibus questionnaire includes standard demographic/ classification questions, which include the following:

RESPONDENT DEMOGRAPHICS	HOUSEHOLD CHARACTERISTICS
Age*	Income*
Gender*	Homeownership
Education*	Household Size/Composition
Employment Status	Age of children
Race*	Region*
Metro Status*	
Marital Status	
Party Identification	
Political Ideology	
Voter Registration	
Parental Status	
Religion	
Health Insurance Status	

The CATI system allows for computer control of questionnaire administration, automatic handling of skip pattern response editing, and range checks. Closed-ended responses are ready for tabulation following completion of the last interview. Each unit in the sample receives as many calls as necessary in order to survey qualified respondents and to fulfill the required number of interviews within each sub-strata of the samples. Additional callback attempts follow a differential callback schedule (AM/PM, alternate days, weekdays-weekends) to ensure the highest completion rate possible.

Weighting

Each SSRS Omnibus insert is weighted to provide nationally representative and projectable estimates of the adult population 18 years of age and older. The weighting process takes into account the disproportionate probabilities of household and respondent selection due to the number of separate telephone landlines and cellphones answered by respondents and their households, as well as the probability associated with the random selection of an individual household member. Following application of the above weights, the sample is post-stratified and balanced by key demographics such as age, race, sex, region, and education. The sample is also weighted to reflect the distribution of phone usage in the general population, meaning the proportion of those who are cell phone only, landline only, and mixed users. Specific steps are provided below:

- Probability of Selection (P_{phone}):** A phone number's probability of selection depends on the number of phone-numbers selected out of the total sample frame. So for each respondent whose household has a landline phone number this is calculated as total landline numbers dialed divided by total numbers in the landline frame and conversely for respondents answering at least one cell phone number, this is calculated as total cell phone numbers divided by total numbers in the cell phone frame.

- **Probability of Respondent selection (P_{select}):** In households reached by landline, a single respondent is selected. Thus, the probability of selection within a household is inversely related to the number of adults in the household.
- **Total Probability of Selection:** This is calculated as the phone number's probability of selection (by frame), and for landlines, divided by the number of adults in the household. Thus, for each respondent a probability can be calculated for being reached via landline (LL_{prob}) and for being reached via cell phone ($Cell_{\text{prob}}$). These calculations are:

$$LL_{\text{prob}} = P_{\text{phone}} * P_{\text{select}}$$

$$Cell_{\text{prob}} = P_{\text{phone}}$$

The sample weights derived at this stage are calculated as the inverse of the combined probability of selection, or:

$$1 / (LL_{\text{prob}} + Cell_{\text{prob}} - LL_{\text{prob}} * Cell_{\text{prob}})$$

- **Post Stratification Iterative Proportional Fitting ('raking'):** With the base-weight applied, the sample will undergo the process of iterative proportional fitting (IPF), in which the sample will be balanced to match known adult-population parameters based on the most recent March Supplement of the U.S. Census Bureau's Current Population Survey (CPS)¹. This process of weighting will repeat until the root mean square error for the differences between the sample and the population parameters is 0 or near-zero.

The population parameters used for post-stratification are: Age (18-29; 30-49; 50-64; 65+) by gender; Census region (Northeast, North-Central, South, West), Education (less than high school, high school graduate, some college, four-year college or more) by age; Education (same breaks) by gender; race/ethnicity (white non-Hispanic; Black non-Hispanic; Hispanic and born in the U.S.; Hispanic and born outside of the U.S.²; Other non-Hispanic); marital status (married/not married), population density (divided into quintiles) and phone-usage (cell phone only, landline only, both).

- **Weight truncation ('trimming'):** To ensure the consistency of the population estimates produced week-to-week by Excel, the weights will undergo truncation (or 'trimming') so that they do not exceed 4.0 or fall below under 0.25.

The sum of weights will equal the sample N.

Margin of Sampling Error

Specialized sampling designs and post-data collection statistical adjustments require analysis procedures that reflect departures from simple random sampling. SSRS calculates the effects of these design features

¹ Sarah Flood, Miriam King, Renae Rodgers, Steven Ruggles, and J. Robert Warren. Integrated Public Use Microdata Series, Current Population Survey: Version 6.0 [dataset]. Minneapolis, MN: IPUMS, 2018. <https://doi.org/10.18128/D030.V6.0>

² Since this is meant to address the percent of Spanish speakers in the weighted sample, respondents born in Puerto Rico are included with those born outside of the U.S.

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 complex sample designs and systematic non-response. SSRS calculates the composite design effect for a sample of size n , with each case having a weight, w , as:

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

The design effect for this survey was 1.28 overall.

The survey's margin of error is the largest 95% confidence interval for any estimated proportion based on the total sample -- one around 50%. For example, the margin of error for the total sample is ± 3.9 percentage points. This means that in 95 out every 100 samples using the same methodology, estimated proportions based on the entire sample will be no more than 3.9 percentage points away from their true values in the population. It is important to remember that sampling fluctuations are only one possible source of error in a survey estimate. Other sources, such as measurement error, may contribute additional error of greater or lesser magnitude.