AAPOR Standards Best Practices
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Table of Contents

1. Planning for your survey

Is a survey the best method for answering your research question?

Surveys are an important research tool for learning about the feelings, thoughts, and behaviors of groups of individuals. However, surveys may not always be the best tool for answering your research questions. They may be appropriate when there is not already sufficiently timely or relevant existing data on the topic of study. Researchers should consider the following questions when deciding whether to conduct a survey:
- What are the objectives of the research? Are they unambiguous and specific?
- Have other surveys already collected the necessary data?
- Are other research methods such as focus groups or content analyses more appropriate?
- Is a survey alone enough to answer the research questions, or will you also need to use other types of data (e.g., administrative records)?

Surveys should not be used to produce predetermined results, campaigning, fundraising, or selling. Doing so is a violation of the [AAPOR Code of Professional Ethics](#).

Should the survey be offered online, by mail, in person, on the phone, or in some combination of these modes?

Once you have decided to conduct a survey, you will need to decide in what mode(s) to offer it. The most common modes are online, on the phone, in person, or by mail. The choice of mode will depend at least in part on the type of information in your survey frame and the quality of the contact information. Each mode has unique advantages and disadvantages, and the decision should balance the data quality needs of the research alongside practical considerations such as the budget and time requirements.
- Compared with other modes, online surveys can be quickly administered for less cost. However, older respondents, those with lower incomes, or respondents living in rural areas are less likely to have reliable internet access or to be comfortable using computers. Online surveys may work well when the primary way you contact respondents is via email. It also may elicit more honest answers from respondents on sensitive topics because they will not have to disclose sensitive information directly to another person (an interviewer).
- Telephone surveys are often more costly than online surveys because they require the use of interviewers. Well trained interviewers can help guide the respondent through questions that might be hard to understand and encourage them to keep going if they start to lose interest, reducing the number of people who do not complete the survey. Telephone surveys are often used when the sampling frame consists of telephone

numbers. Quality standards can be easier to maintain in telephone surveys if interviewers are in one centralized location.

- In-person, or face-to-face, surveys tend to cost the most and generally take more time than either online or telephone surveys. With an in-person survey, the interviewer can build a rapport with the respondent and help with questions that might be hard to understand. This is particularly relevant for long or complex surveys. In-person surveys are often used when the sampling frame consists of addresses.
- Mailed paper surveys can work well when the mailing addresses of the survey respondents are known. Respondents can complete the survey at their own convenience and do not need to have computer or internet access. Like online surveys, they can work well for surveys on sensitive topics. However, since mail surveys cannot be automated, they work best when the flow of the questionnaire is relatively straightforward. Surveys with complex skip patterns based on prior responses may be confusing to respondents and therefore better suited for other modes.

Some surveys use multiple modes, particularly if a subset of the people in the sample are more reachable via a different mode. Often, a less costly method is employed first or used concurrently with another method, for example offering a choice between online and telephone response, or mailing a paper survey with a telephone follow-up with those who have not yet responded.

2. Designing your sample

When you run a survey, the people who respond to your survey are called your sample because they are a sample of people from the larger population you are studying, such as adults who live in the U.S. A sampling frame is a list of information that will allow you to contact potential respondents – your sample – from a population. Ultimately, it's the sampling frame that allows you to draw a sample from the larger population. For a mail-based survey, it's a list of addresses in the geographic area in which your population is located; for an online panel survey, it's the people in the panel; for a telephone survey, it's a list of phone numbers. Thinking through how to design your sample to best match the population of study can help you run a more accurate survey that will require fewer adjustments afterwards to match the population.

One approach is to use multiple sampling frames; for example, in a phone survey, you can combine a sampling frame of people with cell phones and a sampling frame of people with landlines (or both), which is now considered a best practice for phone surveys.

Surveys can be either probability-based or nonprobability-based. For decades, probability samples, often used for telephone surveys, were the gold standard for public opinion polling. In these types of samples, there is a frame that covers all or almost all the population of interest, such as a list of all the phone numbers in the U.S. or all the residential addresses, and

individuals are selected using random methods to complete the survey. More recently, nonprobability samples and online surveys have gained popularity due to the rising cost of conducting probability-based surveys. A survey conducted online can use probability samples, such as those recruited using residential addresses, or can use nonprobability samples, such as "opt-in" online panels or participants recruited, through social media or personal networks. [Analyzing and reporting](#) nonprobability-based survey results often require using special statistical techniques and taking great care to ensure transparency about the methodology.

3. Designing your questionnaire

What are some best practices for writing survey questions?

- Questions should be specific and ask only about one concept at a time. For example, respondents may interpret a question about the role of "government" differently - some may think of the federal government, while others may think of state governments.
- Write questions that are short and simple and use words and concepts that the target audience will understand. Keep in mind that knowledge, [literacy skills](#), and [English proficiency](#) vary widely among respondents.
- Keep questions free of bias by avoiding language that pushes respondents to respond in a certain way or that presents only one side of an issue. Also be aware that respondents may tend toward a socially desirable answer or toward saying "yes" or "agree" in an effort to please the interviewer, even if unconsciously.
- Arrange questions in an order that will be logical to respondents but not influence how they answer. Often, it's better for general questions to come earlier than specific questions about the same concept in the survey. For example, asking respondents whether they favor or oppose certain policy positions of a political leader prior to asking a general question about the favorability of that leader may prime them to weigh those certain policy positions more heavily than they otherwise would in determining how to answer about favorability.
- Choose whether a question should be closed-ended or open-ended. Closed-ended questions, which provide a list of response options to choose from, place less of a burden on respondents to come up with an answer and are easier to interpret, but they are more likely to influence how a respondent answers. Open-ended questions allow respondents to respond in their own words but require coding in order to be interpreted quantitatively.
- Response options for closed-ended questions should be chosen with care. They should be mutually exclusive, include all reasonable options (including, in some cases, options such as "don't know" or "does not apply" or neutral choices such as "neither agree nor disagree"), and be in a logical order. In some circumstances, response options should be rotated (for example, half the respondents see response options in one order while the other half see it in reverse order) due to an [observed tendency](#) of respondents to pick the first answer in self-administered surveys and the last answer in interviewer-

administered surveys. Randomization allows researchers to check on whether there are order effects.
- Consider what languages you will offer the survey in. Many U.S. residents speak limited or no English. Most nationally representative surveys in the U.S. offer questionnaires in both English and Spanish, with bilingual interviewers available in interviewer-administered modes.
- See AAPOR's resources on question wording for more details

How can I measure change over time?

If you want to measure change, don't change the measure.

To accurately measure whether an observed change between surveys taken at two points in time reflects a true shift in public attitudes or behaviors, it is critical to keep the question wording, framing, and methodology of the survey as similar as possible across the two surveys. Changes in question wording and even the context of other questions before it can influence how respondents answer and make it appear that there has been a change in public opinion even if the only change is in how respondents are interpreting the question (or potentially mask an actual shift in opinion).

Changes in mode, such as comparing a survey conducted over the telephone to one conducted online, can sometimes also mimic a real change because many people respond to certain questions differently when speaking to an interviewer on the phone versus responding in private to a web survey. Questions that are very personal or have a response option that respondents see as socially undesirable, or embarrassing are particularly sensitive to this mode effect.

If changing the measure is necessary -- perhaps due to flawed question wording or a desire to switch modes for logistical reasons -- the researcher can employ a split-ballot experiment to test whether respondents will be sensitive to the change. This would involve fielding two versions of a survey -- one with the previous mode or question wording and one with the new mode or question wording -- with all other factors kept as similar as possible across the two versions. If respondents answer both versions similarly, there is evidence that any change over time is likely due to a real shift in attitudes or behaviors rather than an artifact of the change in measurement. If response patterns differ according to which version respondents see, then change over time should be interpreted cautiously if the researcher moves ahead with the change in measurement.

How can I ensure the safety, confidentiality, and comfort of respondents?
- Follow your institution's guidance and policies on the protection of personal identifiable information and determine whether any data privacy laws apply to the study. If releasing individual responses in a public dataset, keep in mind that demographic information and

survey responses may make it possible to identify respondents even if personal identifiable information like names and addresses are removed.

- Surveys that ask questions about mental health, sexual assault or other trauma, discrimination, substance abuse, or other sensitive topics may pose unique risks to respondents. Consider taking one or more of the following steps:
    - Consult an [Institutional Review Board](#) for recommendations on how to mitigate the risk, even if not required by your institution.
    - Disclose the sensitive topic at the beginning of the survey, or just before the questions appear in the survey, and [inform respondents](#) that they can skip the questions if they are not comfortable answering them (and be sure to program an online survey to allow skipping, or instruct interviewers to allow refusals without probing).
    - Provide links or hotlines to resources that can help respondents who were affected by the sensitive questions (for example, a hotline that provides help for those suffering from eating disorders if the survey asks about disordered eating behaviors).
- Build rapport with a respondent by beginning with easy and not-too-personal questions and keeping sensitive topics for later in the survey.
- Keep respondent burden low by keeping questionnaires and individual questions short and limiting the number of difficult, sensitive, or open-ended questions.
- Allow respondents to skip a question or provide an explicit "don't know" or "don't want to answer" response, especially for difficult or sensitive questions. Requiring an answer increases the risk of respondents choosing to leave the survey early.

4. Fielding your survey

If I am using interviewers, how should they be trained?

Interviewers need to undergo training that covers both recruiting respondents into the survey and administering the survey. Recruitment training should cover topics such as contacting sampled respondents and convincing reluctant respondents to participate. Interviewers should be comfortable navigating the hardware and software used to conduct the survey and pronouncing difficult names or terms. They should have familiarity with the concepts the survey questions are asking about and know how to help respondents without influencing their answers. Training should also involve practice interviews to familiarize the interviewers with the variety of situations they are likely to encounter. If the survey is being administered in languages other than English, interviewers should demonstrate language proficiency and cultural awareness. Training should address how to conduct non-English interviews appropriately.

Interviewers should be trained in protocols on how best to protect the health and well-being of themselves and respondents, as needed. As an example, during the COVID-19 pandemic,

training in the proper use of personal protective equipment and social distancing would be appropriate for field staff.

What kinds of testing should I do before fielding a survey?

Before fielding a survey, it is important to pretest the questionnaire. This typically consists of conducting cognitive interviews or using another qualitative research method to understand respondents' thought processes, including their interpretation of the questions and how they came up with their answers. Pretesting should be conducted with respondents who are similar to those who will be in the survey (e.g., students if the survey sample is college students).

Conducting a pilot test to ensure that all survey procedures (e.g., recruiting respondents, administering the survey, cleaning data) work as intended is recommended. If it is unclear what question wording or survey design choice is best, implementing an experiment during data collection can help systematically compare the effects of two or more alternatives.

What kinds of monitoring or quality checks should I do on my survey?

Checks must be made at every step of the survey life cycle to ensure that the sample is selected properly, the questionnaire is programmed accurately, interviewers do their work properly, information from questionnaires is edited and coded accurately, and proper analyses are used. The data should be monitored while it is being collected by using techniques such as observation of interviewers, replication of some interviews (re-interviews), and monitoring of response and paradata distributions. Odd patterns of responses may reflect a programming error or interviewer training issue that needs to be addressed immediately.

How do I get as many people to respond to the survey as possible?

It is important to monitor responses and attempt to maximize the number of people who respond to your survey. If very few people respond to your survey, there is a risk that you may be missing some types of respondents entirely, and your survey estimates may be biased. There are a variety of ways to incentivize respondents to participate in your survey, including offering monetary or non-monetary incentives, contacting them multiple times in different ways and at different times of the day, and/or using different persuasive messages. Interviewers can also help convince reluctant respondents to participate. Ideally, reasonable efforts should be made to convince both respondents who have not acknowledged the survey requests as well as those who refused to participate.

5. Analyzing and reporting the survey results

What are the common methods of analyzing survey data?

Analyzing survey data is, in many ways, similar to data analysis in other fields. However, there are a few details unique to survey data analysis to take note of. It is important to be as transparent as possible, including about any statistical techniques used to adjust the data.

Depending on your survey mode, you may have respondents who answer only part of your survey and then end the survey before finishing it. These are called partial responses, drop offs, or break offs. You should make sure to indicate these responses in your data and use a value to indicate there was no response. Questions with no response should have a different value than answer options such as "none of the above," "I don't know," or "I prefer not to answer." The same applies if your survey allows respondents to skip questions but continue in the survey.

A common way of reporting on survey data is to show cross-tabulated results, or crosstabs for short. Crosstabs are when you show a table with one question's answers as the column headers and another question's answers as the row names. The values in the crosstab can be either counts -- the number of respondents who chose those specific answers to those two questions -- or percentages. Typically, when showing percentages, the columns total to 100%.

Analyzing survey data allows us to estimate findings about the population under study by using a sample of people from that population. An industry standard is to calculate and report on the margin of sampling error, often shortened to the margin of error. The margin of error is a measurement of confidence in how close the survey results are to the true value in the population. To learn more about the margin of error and the credibility interval, a similar measurement used for nonprobability surveys, please see AAPOR's Margin of Error resources.

What is weighting and why is it important?

Ideally, the composition of your sample would match the population under study for all the characteristics that are relevant to the topic of your survey; characteristics such as age, sex, race/ethnicity, location, educational attainment, political party identification, etc. However, this is rarely the case in practice, which can lead to the results of your survey being skewed. Weighting is a statistical technique to adjust the results to adjust the relative contributions of your respondents to match the population characteristics more closely. To learn more about weighting, please see AAPOR's Weighting resources.

What are the common industry standards for transparency in reporting data?

Because there are so many different ways to run surveys, it's important to be transparent about how a survey was run and analyzed so that people know how to interpret and draw conclusions from it. AAPOR's Transparency Initiative has established a list of items to report with your survey results that uphold the industry transparency standards. These items include sample size, margin of sampling error, weighting attributes, the full text of the questions and answer options, the survey mode, the population under study, the way the sample was constructed, recruitment, and several other details of how the survey was run. The list of items to report can vary based on the mode of your survey -- online, phone, face to face, etc. Organizations who want to commit to upholding these standards can also become members of the Transparency Initiative.