Surveys

ON PAGE...

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What Is a Survey?

Technically, a survey is a method of collecting information from a group of individuals through questioning. Interviews are surveys, but, typically, when we talk about surveys, we're referring to written questionnaires.

Surveys are designed to collect information in a uniform manner so the results can be combined and summarized. This contrasts with other data-collection methods such as in-depth interviews or focus groups, which explore issues openly without constraint or predetermined categories. This guide will focus on written surveys or questionnaires in both online and traditional paper-and-pencil formats.

> **Survey**
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> A method of collecting information from a group of individuals through questioning, most often through written questionnaires. Surveys are designed to collect information in a uniform manner so the results can be combined and summarized.

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When Is It Best to Conduct a Survey?

Written surveys are most useful when:

1. You want to collect information from a relatively large number of individuals.
2. You need to make sure your results represent the viewpoints or characteristics of a particular population (e.g., knowledge, behaviors, demographics).
3. You have a fairly short time period for data collection.
4. Your budget isn't large enough to support focus groups, observations, or other more involved data-collection methods.

Surveys are also most useful when you want to capture a broad range of information, and when the information you need can be captured through selected-response questions and short answers. If you need to generate an in-depth understanding of complex issues, surveys may not be appropriate.

If appropriate and large enough samples are surveyed, the results have high generalizability.

What Are the Advantages of Surveys?

Written surveys are relatively inexpensive to administer, particularly as the number of participants increases. Data from surveys are simpler and less time consuming to analyze compared to data from other methods. Written surveys can be easily standardized, meaning that all participants are given the same questions with no variations. As a result, written surveys are less prone to subjectivity and bias.

If appropriate and large enough samples are surveyed, the results have high generalizability. This means the results can be said to represent individuals who were not surveyed, but who are similar to survey respondents in some ways. It's also possible to promise confidentiality and anonymity with surveys.

What Are the Disadvantages of Surveys?

Surveys can be impersonal and typically do not provide a means for participants to ask questions or clear up confusion. For participants who find reading difficult, a survey may be hard to complete unless it is read aloud by a survey administrator. As a result, the data produced can be inaccurate or misleading.

Surveys are generally designed to yield data that can be reduced to categories or numbers. The results are less rich than those from more qualitative methods such as focus groups or interviews. Consequently, surveys do not easily allow researchers to explore issues in depth or to follow up on responses.

Finally, surveys require large, carefully selected samples to increase their generalizability.

What About Online Surveys?

Online survey programs tend to be user friendly and usually provide tutorials that help you develop your own online surveys.

The last decade has seen an increase in the use of computers and the Internet for survey data collection. Online surveys are now a common research tool. Participants can complete online surveys at their convenience, without postage or travel costs.

These surveys can be developed with "skip patterns" which simplify them and reduce completion time for respondents. For example, participants who respond to a particular item in one way, such as answering "yes," can be asked a follow-up question that's not asked of participants who answered "no" to that item.

There are many companies that offer software, technical assistance and programming for web-based surveys (e.g., SurveyMonkey, Zoomerang, SurveyGizmo and others). These online programs tend to be user friendly and usually provide tutorials that help you develop your own online surveys. They store your data and, at any point in data collection, you can view the results with simple statistics and graphs. You also can easily download your data to use in other programs for analysis. Depending upon the complexity of the survey and the particular assistance needed, the costs of an online survey range from fairly minimal to somewhat high.

How Do I Develop a Survey?

There are several important steps to developing a survey. These include: (1) identifying your purpose and objectives; (2) identifying your target population; (3) creating your survey; and (4) pilot testing your survey.

Let's take a look at each step.

(1) Identify your purpose and objectives

The more thought and effort you put into selecting the objectives for data collection in general, and your survey in particular, the more likely you are to collect quality information that will be useful.

Survey development should be guided by a set of research questions. Determine if you're interested in collecting information about the demographics of your sample, their attitudes about a particular issue, their behaviors, or their knowledge about a particular topic. You may also want to explore areas such as change over time or comparisons to other populations.

Be clear about these interests from the outset. As you are developing your survey, check back periodically to make sure you're effectively addressing your research questions.

(2) Identify your target population

Once you determine what you want to know, you need to determine whom you want to survey. Are you interested in individuals who live in a particular geographic area? Those who've received a particular service? People who share a particular characteristic?

For example, you might narrow your population to "all African-American tenth-grade boys at Fairview High School," or "all youth currently participating in after-school program X."

(3) Create your survey

Once you've identified your research questions or objectives and your target population, you can begin developing your survey. You might decide to use existing survey questions or scales for all or part of your survey, or write your own items.

You may want to break your survey down into sub-scales—smaller sets of items that each measure single concepts. You can develop items to measure each of these sub-scales. For example, if you're examining issues related to sexual health, your survey might measure condom use behavior, current substance use, and HIV knowledge.

Here are some things to think about when developing your survey.

Create Survey: Survey format

There are several methods for disseminating written surveys. They can be sent via e-mail or snail mail, placed on the Internet, or administered to individuals and groups face to face. Think about:

- Your budget.
- The geographic distribution of your population.
- Your ability to locate and reach your population.
- The likelihood of your population responding. You will need to send out many surveys for every response you get back. Some groups are more likely to respond than others.
- The resources you have to administer the survey. Consider who will develop it, test it, correct it, type it up or do layout, duplicate it, arrange mailing lists, mail/e-mail, track responses, send out reminders to non-responders, log and store responses safely, archive responses, and so on.
- The level of assurance you need that the individual intended to receive the survey is the person who actually filled it out.

- Whether respondents will need access to other materials to complete to the survey.

Create Survey: Item format

Survey items (questions) can be either open-ended—questions that require respondents to construct or write a response—or closed-ended—questions that ask respondents to select a response. Open-ended or unstructured items typically work better in interviews and focus groups and should be used carefully in surveys. However, open-ended questions can add value to a written survey by giving respondents an opportunity to add "comments" or an "other" answer.

Keep in mind that open-ended items require more time for analysis. If open-ended items are used, language in the survey must be very clear.

Example: If there are two parts to your open-ended question (for example, "Describe a long-term goal you have and give two examples of how choosing to have sex now could affect this goal"), include each part as a separate item.

1. Describe ONE long-term goal you have.

   _____

2. Give TWO examples of how choosing to have sex now could affect this goal.

   (1) _____

   (2) _____

Most written surveys are comprised of closed-ended or structured items. These can include:

- **Dichotomous questions.** These are questions that ask respondents to choose between two options, such as yes/no or true/false.
- **Nominal questions.** These are questions that ask for a classification, such as "choose your favorite fruit." Respondents can be asked to provide only one answer or allowed to choose more than one option.
- **Ranks.** These are questions that ask respondents to rank several responses.

Examples:

Dichotomous questions ask respondents to choose between two options, such as yes/no or true/false.

- My school offers healthy lunches. ☐ Yes ☐ No
- Using an oral contraceptive can protect a person from HIV. ☐ True ☐ False

Nominal questions ask respondents for a classification. These questions can request only one answer, or allow for more than one option. In the following example, only one answer can be correct.

- Which of the following are you trying to do about your weight?

  ☐ Lose weight
  ☐ Gain weight
  ☐ Stay the same weight
  ☐ I am not trying to do anything about my weight

Rank questions ask respondents to rank several responses.

- Rank each of the following 6 activities from most interesting to least interesting (1=most interesting; 6=least interesting).

  ____ Running ____ Pilates
  ____ Walking ____ Cycling
  ____ Yoga ____ Rowing

One thing to consider when developing Likert-type questions is whether or not to use a midpoint in the response option.

Interval questions give respondents response options that are ordered. The most common type of interval question is a Likert scale. Items ask respondents to choose an answer along a scale, such as *strongly agree-agree-disagree-strongly disagree,* or *always-sometimes-never.*

One thing to consider when developing Likert-type questions is whether or not to use a midpoint in the response option. For example, a Likert scale of 5 offers a midpoint of 3. The mid-point is often neutral or undecided.

Creating a scale without a midpoint, such as a Likert scale of 4, compels a respondent to choose one side or the other.

You also want to think about how many scale points to use. Three scale points often do not give enough range to show change over time, while scales over seven points can become too large for users to make meaningful distinctions.

Examples:

Interval question with a 5-point Likert item. Respondents can choose the midpoint if they are neutral or undecided.

- It's important to read nutrition labels on packaged foods before deciding whether to buy them.

☐ Strongly agree
☐ Agree
☐ Neutral
☐ Disagree
☐ Strongly Disagree

Interval question not in a Likert format. Respondents are given response options that are ordered.

- On how many days during your last full week at school did you exercise or take part in physical activity that made your heart beat fast and made you breathe hard for at least 30 minutes?

☐ 0 days
☐ 1 day
☐ 2 days
☐ 3 days
☐ 4 days
☐ 5 days

Create Survey: Item wording

Make sure the wording of your item is clear, effective and efficient for measuring its content. Here are some points to consider when developing an item:

1. **Think carefully about how much detail you need.** For example, do you need to know every academic degree a respondent has obtained, or just the highest degree? Do you need an actual birth date or just an age range? A survey with too much detail becomes monotonous and may not be completed. At the same time, you need enough detail to answer your research questions.
2. **Make items precise.** For example, ask, "In the past month, how many times have you had vaginal intercourse without a condom?" instead of, "How many times have you had unprotected sex?" which is much more vague. Precise wording leads to better data.

Example:

Precise Item:

- In the past 30 days, how many times have you had vaginal intercourse without a condom?

a) None **b)** 1–2 **c)** 3–4 **d)** 5 or more

3. **Avoid double-barreled questions.** Be wary of using "and" in an item. For example, instead of an item such as, "How likely are you to share what you learned from the program with your friends and family?" create two items: one that asks about friends and one that asks about family.

4. **Develop response options that are *mutually exclusive* and *exhaustive.*** In most cases, you want items for which only one answer is correct. In all cases, you want items that cover all possible answers.

Example:

This is a **poorly-worded item** with answers that are neither mutually exclusive nor exhaustive.

- In the past six months, with how many people have you had vaginal intercourse?

  a) 1 person **b)** 2–3 people **c)** 3–6 people **d)** 6 or more people

Respondents won't know how to answer this question if they've had vaginal sex with 3 people, because the responses are not mutually exclusive. And how does a respondent answer if he or she has never had vaginal sex? What about people who've had vaginal sex before, but not in the past six months? Respondents cannot answer correctly because the responses aren't exhaustive.

It's important that your participants be able to read and understand survey items. Make sure your survey is written at an appropriate reading level.

5. **Avoid making desired responses obvious or biased.** Respondents typically want to "please" the evaluators or look good, so they often try to figure out what the researcher wants and respond accordingly. This kind of response bias can be unconscious, and respondents may not be aware that they're being influenced.

6. **Write sensitive items carefully,** such as questions about STDs, abortion, sexual abuse, etc. Place them toward the end of the survey.

7. **Keep items short and easy to read,** so the questions will be clearly understood.

Create Survey: Language and readability

It's important that your participants be able to read and understand survey items. Make sure your survey is written at an appropriate reading level. Clear layout is another factor that can help with readability. It often helps to add graphics, increase font size and include "white space." You may want to include an oral accompaniment to help individuals who don't read well.

Think about the length of the survey and whether participants will be able to complete their answers in one sitting.

You may need to have the survey translated if some or all of your respondents are more comfortable in other languages.

(4) Pilot test your survey

It's advisable always to pilot test your survey prior to dissemination, even with just a few participants. Pilot testing enables you to determine whether your questions and instructions are clear, whether participants are giving you the desired responses, how long the survey takes to complete, and what your response rates might be.

Prior and in addition to pilot testing, you may need to have your survey reviewed by an Institutional Review Board (IRB) at your organization or funders.

Sometimes you may also want to assess the reliability and validity of the items and survey.

- **Reliability** refers to stability of your results. Would the same respondent respond the same way every time he or she completed the survey? Are different respondents interpreting the items and response options in the same way? Reliability is often assessed by having participants complete the survey on multiple occasions.
- **Validity** refers to the "truth" of the results. Do your survey items and subscales really measure what you intended to measure (for example, sexual risk taking, respondents' likelihood of remaining abstinent, or the success of your program)? Validity is often assessed by having participants who are known to be in different groups complete the survey, and then comparing the results from the two groups. For example, individuals known to be either depressed or not depressed might help test the validity of a scale about mood or depression.

If you need to test for reliability and validity, consult with someone who has the appropriate expertise to do this. Be aware that reliability and validity affect the confidence you can have in your survey results.

Prior and in addition to pilot testing, you may need to have your survey reviewed by an Institutional Review Board (IRB) at your organization or funders. This is to ensure that no human subjects are being harmed in any way by completing your survey, and that all subjects are able to give informed consent to participate. If you need an IRB review, you'll need to complete a detailed application and follow a clear protocol. For more information about IRBs, check the Office for Human Research Protections (OHRP) at http://www.hhs.gov/ohrp/.

How Do I Implement a Survey?

There are a number of steps to implementing a survey. These include: (1) sampling your population; (2) recruiting participants; and (3) obtaining consent and ensuring confidentiality. Let's take a look at each step.

(1) Sample your population

Once your survey is ready, you need to determine how you will select respondents. Will you include everyone who participated in a particular intervention, a carefully selected sample of individuals who receive services from a local organization, or the "man on the street"?

Survey sampling can get rather intricate. If you need to ensure that your results are representative of a particular population, such as all Latino adolescents in a particular school district, consult with someone with expertise in this area.

(2) Recruit participants

When surveying individuals under age 18, you often need the consent of a parent or guardian. If you are surveying adults, you often need written assent.

Completing a survey requires time and effort on the respondents' part. If you need to recruit survey participants, think about the reasons people in your population sample might make the necessary effort to participate. Are you surveying a group who are motivated to do good and will offer their time willingly? Do you want to reach a group who are more likely to respond if there's a reward for participating, such as cash, gift cards or a popular product? Are you surveying a large group who might be persuaded to respond by the chance to win a tablet computer? Identify appropriate incentives for the population you wish to survey.

You may want to make a plan for getting the word out about your survey. Let potential respondents know about any incentives. When appropriate, tell them how their participation in the survey will help others.

(3) Obtain consent and ensure confidentiality

There are several issues to think about when it comes time to actually administer the survey. Do you need *consent?* When surveying individuals under age 18, you often need the consent of a parent or guardian. If you are surveying adults, you often need written assent.

Sometimes you can get *passive consent* for minors by sending a letter home and asking parents to call or return a form if they do not want their child to participate. At other times, you need to get *active consent* by asking parents to sign a form stating they will allow their child to participate before administering the survey. In this case, it's extremely important to have good documentation to avoid surveying anyone without consent.

When seeking consent or assent, remember to provide all the details of participation. For example, will you follow up with non-respondents? If so, at what time intervals? Will you provide incentives for participation, such as gift certificates to local merchants, food or cash?

It's also vital to consider questions of confidentiality. Are you promising or implying *confidentiality* or *anonymity?* Anonymity often helps researchers receive more honest answers, and thus more valid results. However, sometimes you can't ensure complete anonymity. For example, the identifications you use may be linked to a name somewhere, or your online survey program might save e-mail addresses with responses.

If you cannot guarantee anonymity, you need to let the respondents know. It's always good to maintain as much confidentiality or privacy as possible. For example, you can use identifications linked to names that only the research staff will see and that will be destroyed once all data are collected and ready to analyze.

How Do I Analyze Survey Results?

Analyzing data can be complicated. The guidelines below give a general description of how to compile your data, but are not meant to be your only resource. For reliable results, work with someone who has experience analyzing survey data.

Prepare your data and establish data protocols

Before you can begin analyzing data you need to have it in a format you can use. If you did not do an online or electronic survey, you'll need someone to enter data.

It's important to set up your data entry system in a format that's easy to use and that minimizes the chance of errors. Develop a codebook for your survey—for example, disagree = 1, neutral = 2, agree = 3.

You'll also need to determine the format for your data and decide how and where it will be stored. Do you want the data in a spreadsheet such as Excel, a database, or a statistical program such as SPSS? Who will have access to the data? Do you need to password protect the data to keep it secure? Determine how you will code and use missing, unclear or erroneous data, such as a respondent who gives two responses when asked for only one.

Additionally, as part of the data preparation process, you may need to create "scores" by summing across items, calculating an average, and so on. For example, if you asked a series of five yes/no questions about the respondents' use of various types of birth control (Have you ever used a condom? Have you ever used oral contraceptives? Have you ever used the patch? Have you ever used an IUD? Have you ever used any other form of contraception not listed here?), you might want to give 1 point for each method checked to yield a score that could range from 0 to 5.

Once data entry has begun, sample approximately 10% of the entered data for verification—this means you compare responses on the survey to what was actually entered in the database to look for data-entry errors. If there are many errors, you may need to retrain your data-entry staff and double check more samples.

Determine how sophisticated your analyses need to be

Can you report straight frequencies, such as percentages of respondents selecting each response category? Do you need to perform simple statistical analyses, such as means or percentages? Do you need more complicated calculations, such as regressions and ANOVAs?

There are many components to an effective survey, but even basic surveys can provide useful data.

It's fairly easy to set up spreadsheets to calculate straight frequencies, but more complicated analyses such as regressions and ANOVAs require more sophisticated statistical programs. Make sure the program you select can handle your data and analyses and that you or someone in your project is skilled in using it.

Determine how you want to display your results

Most reports typically present results through a combination of text, tables and graphs or visual displays. You need to determine your needs and what best presents the results to your audience. Visual displays are often clearest and can have tremendous impact, but they can't present a lot of detail in a single display.

Summing Up

There are many components to an effective survey, but even basic surveys can provide useful data. Online survey tools make it easy to develop and test simple sets of questions. This may be a good way for an organization to begin exploring the survey form.

For more complex research questions, item development, survey administration or data analysis, consider talking with an evaluation professional. You should be able to determine the scope needed to answer your questions fairly quickly. This will make it clear whether and where your organization may need additional assistance.

Gathering good survey data to inform your organization's ability to measure and improve success can be immensely helpful and genuinely satisfying.

To discuss our evaluation partnerships, contact Dr. Pamela Drake at: evaluation@etr.org

Reference

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