

Learning Objectives

- 12.1 Define survey research.
- 12.2 Differentiate between the types of errors that affect survey research.
- 12.3 Differentiate between the types of survey designs.
- 12.4 Differentiate between the various methods of data collection via surveys.
- 12.5 Identify the ethical and diversity issues associated with survey research.

Competencies Covered	Learning Objectives	Dimension
Competency 1 <i>Demonstrate Ethical and Professional Behavior</i>	12.5 Identify the ethical issues associated with survey research.	Skills
Competency 2 <i>Engage Diversity and Difference in Practice</i>	12.5 Identify the diversity issues associated with survey research.	Skills

PBL Case 12

Opioid Knowledge Among Older Adults

By responding to the questions related to this case example, you will be able to identify what method of data collection for survey research is appropriate.

Dr. Michelle Avery, the director of a senior center, recently read an article that said older adults (i.e., adults age 50 and above) were often overlooked when discussing the opioid epidemic. She was surprised to learn that between 2000 and 2013, the misuse of prescription

Master the content at
edge.sagepub.com/farmer

opioid use more than doubled for older adults. Opioid misuse in this population is associated with heart attacks, fall-related injuries, and suicide ideations. The article also mentioned the risk factors for opioid use, including previous illicit drug use in the past year, being bothered by pain, and posttraumatic stress disorder.

During a meeting Dr. Avery had with her staff, she raised the following question: “What should be the agency’s long-term approach to addressing substance abuse?” As a result of raising this question, others emerged:

- How knowledgeable are staff as it relates to substance abuse among older adults?
- In what ways is opioid use impacting members of the local community?
- What potential risk factors are present in the community that may contribute to opioid use among older adults?
- What are the ways in which the center can be involved in addressing substance abuse?
- Are older adults in the community aware of the nonpharmacologic approaches to the management of pain?
- What is the risk profile of those who participate in programs at the center for opioid use?

At this point, take a few minutes to think about the case example and do the following:

1. Identify the problem.
2. Determine what you already know about the problem.
3. Determine what information you need to solve the problem.
4. List the questions needed to be answered related to the information you need to solve the problem.

Please write down your responses to each item. You will need to refer to them while reading this chapter.

You are doing your field placement at this center. Dr. Avery is your field supervisor. During orientation for new student interns, Dr. Avery mentions that as a result of a meeting with her staff, she is interested in gathering information to answer the questions raised. She further states that she does not know the best way to gather such information and would like for you and the other student interns to assist her.

Introduction

In this chapter, you will learn about the different methods of data collection for survey research. Ethical and diversity issues one needs to think about when conducting survey research are discussed. The stages of survey development and sources of errors affecting survey research are described.

Survey Research Defined

Survey research is a type of observational research in which respondents are asked a series of questions. Information is collected about opinions, behaviors, attitudes, and beliefs from a specific group of persons. Additionally, survey research is a type of nonexperimental research design as there is no manipulation of the independent variable by the researcher. When conducting survey research, one refers to the individuals completing the surveys as respondents. The term *participant* is used when individuals are participating in an experimental, pre-experimental, or quasi-experimental study. Both probability and nonprobability sampling strategies are used in survey research. The scope of survey research can vary from use of survey instruments that collect data on a wide range of subjects to those that are more narrowly focused (Ruel, Wagner, & Gillespie, 2016a). Studies like the American Values Survey conducted by the Pew Research Center represents an example of a survey broadly focused on gathering data on Americans' values and basic beliefs on such topics as the social safety net, the environment, immigration, religiosity, and political engagement. The American Values Survey, which began in 1987, is an annual cross-sectional survey of adults nationwide. The American Values Survey was designed to provide data on Americans' attitudes about current issues. For example, the 2012 survey gathered data on individuals' beliefs regarding the government's responsiveness to the needs of people, the role of the government in providing a social safety net, and the overall effectiveness of governmental officials. Example items from the 2012 American Values Survey are presented in Table 12.1, along with information related to the number of persons who agreed or disagreed with the statement.

An example of a narrowly focused survey research study is the Fragile Families and Child Wellbeing Study (FFCWS). The FFCWS focuses on the impact of welfare reform, non-marital childbearing, and the role of fathers in economically challenged families (Garfinkel & Zilanawala, 2015), to name a few areas covered on the survey. This study has provided researchers with the opportunity to examine a variety of factors that may contribute to children's and adolescents' well-being, for example, neighborhood disorder (Pei, Wang, Yoon, & Tebbenm 2019), family socioeconomic status and school bonding (Assari, 2019), and contact with the police and the perceptions of the legal system (Geller & Fagan, 2019).

Table 12.1 Examples of Items From the 2012 American Values Survey

Government Responsiveness	Agree	Disagree
People like me don't have any say about what the government does (<i>disagree = high</i>) [Q30a]	55	43
Generally speaking, elected officials in Washington lose touch with the people pretty quickly (<i>disagree = high</i>) [Q30b]	81	16
Most elected officials care what people like me think (<i>agree = high</i>) [Q30c]	35	62
Voting gives people like me some say about how government runs things (<i>agree = high</i>) [Q30d]	69	29
The government is really run for the benefit of all the people (<i>agree = high</i>) [Q30m]	41	57

Source: "The trends in American values: 1987–2012: Partisan polarization surges in the Bush, Obama years." Pew Research Center, Washington, DC (2012) <https://www.people-press.org/values/>.

Sources of Errors Affecting Survey Research

In research studies, we are often using samples of individuals from a population to estimate values of variables in the population. Because of this, we have sampling error.

For example, in our case example, Dr. Avery is interested in the following question: "On a scale from 1 (not confident) to 10 (extremely confident), how confident are you that you know how to manage pain using strategies that do not involve the use of medication (prescriptions or over-the-counter medications)?" Dr. Avery would like to estimate the average level of confidence among the older adults in the community about their use of strategies to manage pain other than the use of drugs. She chose to gather data from a sample of older adults because in most cases it would not be feasible to collect data from the entire population of older adults in the community. Because of her choice, Dr. Avery needs to be concerned about sources of errors that will affect her survey research. There are six sources of errors that she needs to be concerned about: sampling, random, coverage, systematic, measurement, and non-response. These types of errors are described below.

Sampling error occurs when researchers survey a sample of the population instead of conducting a census. A **census** involves collecting data from everyone in the population. Sampling error can be reduced by increasing the sample size. The various sources of error can be divided into two broad categories—random error and systematic error. **Random error** results in chance variations in individual responses around the actual (or "true") values of what is observed for the group. For example, some of the study respondents might not have been wearing their

reading glasses when completing the survey. This could result in a misreading of the question. Someone may have mistakenly circled a “3” when he or she might have really wanted to circle “5.” There is no way for the researcher to predict who would have misread an item because of not wearing their reading glasses. Because someone was not wearing his or her glasses, this will impact the variability of the respondent’s responses.

In Figure 12.1 (page 222), you see the responses to a question from 10 individuals—five from each of the separate samples. Random error did not have an impact on the average responses to the question for the two groups. The group averages were 5.4 for both groups. In order to determine if there is an impact of random error on the responses to the question, you need to assess for variability, which can be done by examining the range of responses and the standard deviations for each sample. Differences in the ranges of responses and the standard deviations between the samples would indicate variability between the groups. Random error is believed to be one of the factors contributing to variability. We can address the bias that random error introduces by using the average of repeating observations as an estimate of the true value.

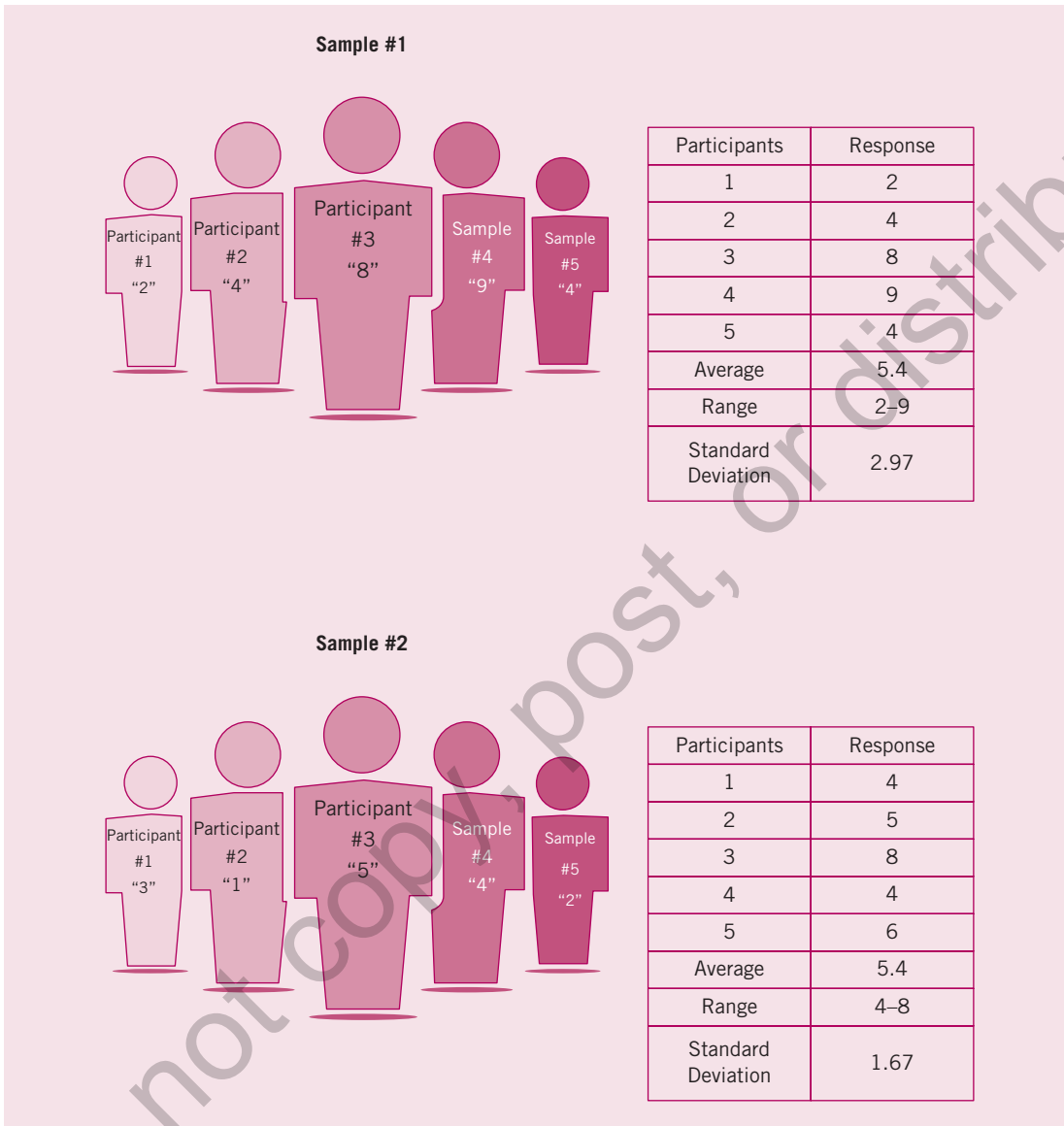
Systematic error (also called systematic bias) is consistent, repeatable error associated with faulty measurement instruments or flawed procedures associated with the data collection. There are three types of systematic error: coverage, measurement, and nonresponse.

Coverage error occurs when researchers do not have a complete list of names of the individuals in the sampling frame from which the sample is drawn. Therefore, there are differences between the sampling frame and target population. Because of this, the sample may not be representative of the population. Coverage error leads to biased results. Coverage error can be reduced by making sure you have a complete list of names of those in the sampling frame.

Measurement error is error associated with the observation itself. Many aspects of the measure can contribute to this form of error. For example, the use of unclear phrasing of items, unfamiliar words or phrases, irrelevant items on a survey, and the interaction between the interviewer and respondent when conducting interview surveys can contribute to measurement error. To reduce measurement error that might be due to the lack of specificity of items when surveying older adults on their use of pain relievers, the National Survey of Drug Use and Health (NSDUH) included pictures of the pill in the questions (Schepis & McCabe, 2016). In order to ensure the items you develop for your survey do not lack specificity, during the early stages of the development of the survey you should seek the feedback from potential respondents and subject area experts to create questions that are clear, concise, and able to capture quality information.

Nonresponse error occurs when all the prospective respondents did not respond to the survey. Nonresponse error also occurs when there is nonresponse to specific questions, therefore limiting the generalizability of the responses to those questions. To decrease nonresponse error, researchers need to follow up with those who did not respond to the survey.

Figure 12.1 Illustration of the Impact of Random Error



Design Phases of the Survey

Developing the survey instrument involves several stages: *Statement of Purpose*, *Literature Review*, *Survey Outline and Development of Items*, *Survey Draft*, *Draft Revision*, *Pilot Testing*, and *Survey Finalization*.

Statement of Purpose

The process of designing the survey begins with considering the information or data that the survey needs to address. During this stage, one should ask the following questions: “What is the study’s aim(s)?” and “What are the specific study questions that the survey intends to answer?” The purpose of the survey informs all stages of the survey design process. A survey can serve more than one purpose. For example, the National Survey on Drug Use and Health’s purposes are to (1) provide up-to-date information on alcohol, tobacco, drug use, mental health and other health-related issues in the United States; (2) support prevention and treatment programs; (3) monitor substance use trends; (4) estimate the need for treatment facilities; and (5) assist with the creation of government policy.

Let us say, in the case example, that in discussion with her staff, Dr. Avery decided the purpose of the study was to determine older adults’ knowledge of risk factors associated with opioid use. Additionally, she wanted the survey to provide information on older adults’ knowledge of nonpharmacologic methods of pain management, along with documentation of their history of existing chronic pain. Given the above, Dr. Avery would have three purposes for her survey.

Besides thinking about the purpose of the survey, you need to think about how often you plan to administer the survey. If you plan to administer the survey only at one point in time, you will use a **cross-sectional survey design**. A disadvantage of a cross-sectional survey design is that it does not allow you to assess changes in the construct of interest. A cross-sectional survey only allows you to collect data that will give you a snap-shot of what is going on. If you plan to administer the survey at multiple points in time, you will use a **longitudinal survey design**. An advantage of a longitudinal survey design is that it allows you to assess changes in the construct of interest. The disadvantage is that it may be too time-consuming or costly to conduct a longitudinal survey design.

Critical Thinking Question 12.1

Assume that a survey can provide Dr. Avery with the answers to the questions that were raised during the meeting with her staff. What information might Dr. Avery need to support the development of a survey? What type of survey design should she use? Justify your response.

Literature Review

Based on the survey’s purpose, a series of research questions can be developed that will guide a literature review focused on determining what needs to be included on the survey. Additionally, the review can determine if measures exist in the literature that could be used to collect the data needed for the study.

Application Checkpoint 12.1

Given the three purposes of Dr. Avery's survey, what research questions could she use to search the literature to support the development of a survey?

Reflecting on the case example, in order for Dr. Avery and her staff to move forward with developing a plan to address opioid use among the center's participants, Dr. Avery has to determine what information is needed to answer the following questions: *In general, what is known about older adults' knowledge of the risk factors for opioid use? What is known about their knowledge of nonpharmacologic approaches to the management of pain? Are there existing measures or surveys that have been used in previous studies to assess opioid use among older adults?*

Application Checkpoint 12.2

Are there other questions you believe Dr. Avery needs to consider? Why or why not?

Let us say that Dr. Avery had the social work interns conduct a literature review to answer the above-mentioned questions. When they conducted a search using online and electronic databases (for example, Google Scholar, PsychINFO and Medline), a number of useful publications were found. Below, is a brief list of these publications.

- Han, B. H., Sherman, S. E., & Palamar, J. J. (2019). Prescription opioid misuse among middle-aged and older adults in the United States, 2015–2016. *Preventive Medicine: An International Journal Devoted to Practice and Theory*, *121*, 94–98. doi:10.1016/j.ypmed.2019.02.018
- Huang, A. R., & Mallet, L. (2013). Prescribing opioids in older people. *Maturitas*, *74*(2), 123–129. doi:10.1016/j.maturitas.2012.11.002
- Karp, J. F., Lee, C.-W., McGovern, J., Stoehr, G., Chang, C.-C. H., & Ganguli, M. (2013). Clinical and demographic covariates of chronic opioid and non-opioid analgesic use in rural-dwelling older adults: The MoVIES project. *International Psychogeriatrics*, *25*(11), 1801–1810. doi:10.1017/S104161021300121X
- Maree, R. D., Marcum, Z. A., Saghafi, E., Weiner, D. K., & Karp, J. F. (2016). A systematic review of opioid and benzodiazepine misuse in older adults. *The American Journal of Geriatric Psychiatry*, *24*(11), 949–963. doi:10.1016/j.jagp.2016.06.003
- Palamar, J. J., Han, B. H., & Martins, S. S. (2019). Shifting characteristics of nonmedical prescription tranquilizer users in the United States, 2005–2014. *Drug and Alcohol Dependence*, *195*, 1–5. doi:10.1016/j.drugalcdep.2018.11.015
- Park, J., Clement, R., & Lavin, R. (2011). Factor structure of Pain Medication Questionnaire in community-dwelling older adults with chronic pain. *Pain Practice*, *11*(4), 314–324. doi:10.1111/j.1533-2500.2010.00422.x

Those articles providing information about risk factors are ones written by Han, Sherman, and Palamar (2019) and Maree, Marcum, Saghafi, Weiner, and Karp (2016). The article by Park, Clement, and Lavin (2011) provided them with information about an existing measure. The items on this measure could possibly be used on the survey that Dr. Avery, the staff, and social work interns plan to develop.

Survey Outline and Development of Items

With the information from the existing literature and keeping the study's purpose in mind, Dr. Avery, the staff, and the social work interns developed an outline for the survey (see Table 12.2). Like a topical outline one might develop for a paper, their outline identified the topics covered in each section. From the outline, specification of the proposed data collection strategy will be identified. See Table 12.3 for the proposed strategies for collecting information for "Current Health Status" and "Risk for Substance Use" sections of the survey. In some cases, instruments that were found in the literature were recommended to be used (see the "Current Health Status" section). In other cases, Dr. Avery, the staff, and social work interns proposed to create their own measures (see the "Risk for Substance Use" section). During the stage of survey outline and development of items, Dr. Avery, the staff, and social work interns need to consider the sequencing of questions on the survey and general guidelines for developing items.

Table 12.2 Outline of Survey Content and Objectives of the Questions

Purpose of the Survey: To determine how much the center participants know about the consequences of and risk factors for opioid use.

- I Informed Consent and Instructions
- II Current Health Status
 - a. Assessment of the overall quality of health
 - b. Current health problems
 - c. Current medication use
- III Risk for Substance Use
 - a. Pain management
 - i. Current practices
 - ii. Historical practices

(Continued)

Table 12.2 (Continued)

Purpose of the Survey: To determine how much the center participants know about the consequences of and risk factors for opioid use.

- b. History of substance use
- c. Family history of substance use
- d. Support network
 - i. Formal
 - ii. Informal

IV Background Information

- a. Gender
- b. Race/ethnicity
- c. Marital status
- d. Economic status
- e. Education
- f. Employment status

Table 12.3 Illustration of the Identification of Data Collection Methods

Sections	Data Required to Answer Questions	Methods for Collecting Data
Current Health Status	Quantitative assessment of overall health	One item self-assessed health status scale will be used. The measure is based on one used in the 2002 World Health Survey (Subramanian, Huijts, & Avendano, 2010)
	Identification of current health problems	Standard checklist of chronic illness. A modified version of the Patient Assessment of Chronic Illness Care Questionnaire will be used (Glasgow et al., 2005)
	Identification of current medication use	Open-ended questions

Sections	Data Required to Answer Questions	Methods for Collecting Data
Risk for Substance Use	Pain management	
	Identification of current practices (categorical variable data)	Checklist of pain management strategies
	Identification of historical practices (categorical variable data)	Checklist of pain management strategies
	Identification of history of substance use (categorical variable data)	Yes/No
	Identification of family history of substance abuse (categorical variable)	Yes/No
	Quantitative assessment of support network (ratio level variable)	Scale measuring the quality of participants' social network

Sequencing of Questions. There are two types of questions that are typically found on surveys: open ended and closed ended. **Open-ended questions** are ones that require the respondents to respond to the question in their own words. A disadvantage of open-ended questions is that you need to code the data so that it can be analyzed. This may be time-consuming. **Close-ended questions** have a list of responses from which the respondents choose their response. An advantage of close-ended questions is that they are already coded. An example of a close-ended question is one where the respondents are asked to rate their attitude about something on a 5-point Likert scale, where 1 = disagree and 5 = agree.

The first question should be one that will result in making the respondent want to complete the survey. Questions should be ordered in a way that they do not influence how subsequent questions are interpreted. Avoid asking knowledge questions before attitude questions. You want to make sure that respondents are knowledgeable about the topic before you ask them about their opinion about the topic. If you include sensitive questions on your survey, they should be in the middle of the survey. If they are at the beginning or end of the survey, the respondents may not respond to them. Questions related to demographic information should be at the end of the survey. The section of the survey where the

demographic information is included is referred to as “Background Information.” There should be a question that asks respondents about their ethnic background and one that asks them about their racial background, as these two constructs are different. Make sure that you provide an open-ended question so the respondents can identify their ethnic and racial backgrounds.

General Guidelines for Developing Items. Ruel, Wagner, and Gillespie (2016b) provide guidelines for the development of survey items. For them, clarity and specificity are critical. This means that items and instructions given to the respondents should use simple, clear language and be free from professional jargon, vague terminology, and abbreviations. When possible, use terms that are commonly used by the respondents. For example, some older African American adults refer to having diabetes as having the *Sugar*. Therefore, on a checklist that includes diabetes as one of the chronic illnesses, the phrase “having the Sugar” should also be included.

Comprehensiveness. Response options should be as comprehensive as possible. For example, traditional gender options (i.e., male and female) do not reflect a comprehensive list of gender options. Recognizing the diversity of gender identities that exists, Facebook allows its users to select from 58 gender options (Goldman, 2014). While a researcher may not want to include all 58 options, she/he/they can use knowledge of the study sample to include those categories likely to have high frequency on the survey. If the respondent does not find a suitable category on the list, he/she/they is given the option to write in his/her/their response.

Mutual Exclusivity. The researcher must be clear about when categories are mutually exclusive. For example, the categories about how each member of the household is related to the person completing the survey are designed to be mutually exclusive.

See the following example (U.S. Census Bureau, 2010):

How is this person related to Person 1?

<input type="checkbox"/> Husband or wife	<input type="checkbox"/> Parent-in-law
<input type="checkbox"/> Biological son or daughter	<input type="checkbox"/> Son-in-law or daughter-in-law
<input type="checkbox"/> Adopted son or daughter	<input type="checkbox"/> Other relative
<input type="checkbox"/> Stepson or stepdaughter	<input type="checkbox"/> Roomer or boarder
<input type="checkbox"/> Brother or sister	<input type="checkbox"/> Housemate or roommate
<input type="checkbox"/> Father or mother	<input type="checkbox"/> Unmarried partner
<input type="checkbox"/> Grandchild	<input type="checkbox"/> Other nonrelative

Avoid creating *double-barreled* questions. **Double-barreled questions** are sometimes referred to as “two-in-one questions” as they ask multiple questions in a single question. “Do you receive support from family *and* friends?” is an example of a double-barreled question. The use of *and* in the sentence is often an indication that you have a double-barreled question. It would be better to make the above-mentioned question two separate questions: “Do you received support from family?” and “Do you receive support from friends?”

Avoid biased or offensive language. Being aware of language that is found to be biased or offensive to the respondent is critical. For example, some persons find it offensive when nonbinary pronouns are not used—when persons use the word *he/she*, when the word *they* should be used. Members of the transgender, gender-queer, and other gender-variant communities or members of the groups that you plan to survey should be consulted regarding construction of survey items and instructions to make sure the language used is not biased or offensive.

Keep in mind that underlying each item are assumptions that are being made about the respondents—assumptions about what experiences they have had and how they view those experiences. Knowing this is important when asking questions about sensitive issues. For example, asking women about their reproductive health and family planning and using terms like *pro-life* or *reproductive rights*, you are making assumptions about how particular groups view an issue. Developers of questions need to be aware of persons’ cultural points of view underlying the words or phrases that are being used, as terms or words are rarely neutral.

Response Biases. Social desirability is one potential response bias that needs to be considered when developing items on the survey. **Social desirability** is the tendency to give socially acceptable responses. Items that ask about behaviors, attitudes, or beliefs that are controversial or stigmatizing may illicit socially desirable responses. In those situations when responses are not anonymous, social desirability is also an issue that needs to be addressed. Collecting data anonymously along with providing respondents with information that clearly indicates only aggregated responses will be published can reduce social desirability.

Acquiescent Response Bias. An **acquiescent response bias** is the tendency of persons to respond in a positive manner to a question regardless of the question being asked. Among those cultural or social groups where the social norms emphasize being polite or not to challenge authority, acquiescence response bias can be a threat to the validity of data collected. Researchers will often use multiple items to measure the same construct or variable as a way of reducing acquiescent response bias. For example, Lavrakas (2008) used a series of items where half were worded so that the “agree” response indicated one position and the other half worded so that the “agree” response indicated the opposite position.

Survey Draft

Once the survey has been outlined and the items have been developed, you can begin drafting the survey. Before the respondents are presented with the actual items that they are to respond to, you need to provide them with a brief overview of the purpose of the survey, without revealing to them the hypotheses of your study; describe what they will be asked to do; indicate approximately how long it will take for them to complete the survey; and indicate the amount of compensation they will receive, if any, for completing the survey. It is important to thank the respondents for their filling out the survey in advance. Once the instructions have been drafted, you can begin drafting each section of the survey, keeping in mind how the items on the survey should be sequenced and the general guidelines for survey development, which were described earlier.

Draft Revision

Once you have finished drafting your survey, you should share it with your colleagues and get their feedback about the questions, instructions, sequencing of the questions, and time it takes to complete the survey. You should ask them to indicate if there are any modifications they think should be made to the survey and to provide you with a rationale for these modifications. Once you have reviewed their feedback, you should revise your survey accordingly.

Pilot Testing

Prior to administering the survey, you should administer it to a small sample of individuals from the target population. The purpose of pilot testing the survey is to get feedback about the questions, instructions, sequencing of the questions, and time it takes to complete the survey. Pilot testing the survey will give you an opportunity to find out if your questions are clear or ambiguous. You should ask the respondents to let you know if they think any of the questions will not be answered. They should provide you with a rationale for why they think the question will not be answered. You should ask them if any of the questions should be modified and how. Additionally, you should ask them to recommend additional questions and explain why they are making these recommendations. Based on the results of pilot testing, you may want to make modifications to your survey.

Survey Finalization

Information from the pilot testing will be used to finalize the survey. The descriptive statistics results will be used to obtain estimates of the reliability of the scales and amount of variability in respondents' responses to items. This information will be used to identify items that need to be eliminated or modified. In addition

to the quantitative data, the collection of qualitative data provides information on how respondents' experience the survey. The qualitative data can also be used to provide feedback on clarity of the items and the instructions for completing the survey. The use of qualitative interviews with respondents can be used to collect in-depth information on what persons are thinking when they are completing their responses to each item. The finalization process would also involve changes to the formatting of the survey to improve its aesthetics.

Table 12.4 presents information related to how Dr. Avery, the staff, and social work interns developed their survey based on the stages described earlier.

Table 12.4 Application of the Design Phases of Survey Development to Dr. Avery's Survey to Assess Opioid Knowledge and Pain Management

Stages of Survey Development			
Stages/Objectives	Research Questions or Study Activity	Hypothesis or Purpose of the Activity	Conclusion/Product
1. Statement of Purpose	What information needs and/or study questions will the survey address?	Development of study's purpose.	Description of the statement of purpose.
2. Literature Review	<p>What is known about the risk factors for opioid use?</p> <p>What are the nonpharmacologic approaches to pain management?</p> <p>Are there existing surveys or measures that could be used to address this study's purpose?</p>	<p>The existing literature identifies the risk factors and nonpharmacologic approaches to pain management.</p> <p>These surveys or measures identified in the literature could be used to address this study's purposes.</p>	<p>Documentation of the knowledge obtained from the literature on the history of substance use, history of experience with chronic pain, knowledge of nonpharmacologic approaches to pain management among cancer patients and those with substance use history has been identified.</p> <p>Surveys exist assessing risk factors and substance use history.</p> <p>Qualitative interviews have been used to assess substance use history and knowledge of nonpharmacologic approaches to pain management.</p>

(Continued)

Table 12.4 (Continued)

Stages of Survey Development			
3. Survey Outline and Development of Items	Outline each section of the survey.	How will each section contribute to the purpose of the study? What specific information will each section provide? What format will the information take?	Survey outline has been developed.
4. Survey Draft	Constructing draft measure	Determine whether existing measures can be incorporated into the survey. Developing of original items or modification of existing items.	Draft version of the survey.
5. Draft Revision	Review of draft survey	Review of each section of draft survey: Is the language in the items and instructions concise, simple, clear, and free from technical jargon and bias? Are there no leading questions? Are you using the words and phrases that are familiar to the respondents?	Revised draft
6. Pilot Testing	Survey administration	Administer to the sample of respondents	Descriptive statistical information
7. Survey Finalization	Final revisions to survey	Revision of the survey based on the results of the pilot testing	Final survey prepared for administration

Methods of Data Collection Used in Survey Research

In this section, we will describe the methods of collecting data from samples in survey research. These methods are mailed surveys, interview surveys, telephone surveys, and online surveys. There are two modes of administering

surveys—self-administered and administered by trained personnel. Mailed and online surveys are referred to as self-administered surveys.

Self-Administered Surveys

A **self-administered survey** is one in which the individual does not receive assistance from others when completing the survey. Interview surveys and telephone surveys are administered to the prospective respondents by trained personnel. In deciding which method of data collection will be used, researchers take into consideration the characteristics of the sample, the types of questions, and the cost and time associated with administering the survey.

Mailed Surveys

Mailed surveys are ones that are mailed to the prospective respondents. A cover letter that explains the purpose of the survey and thanks the prospective respondents in advance for their participation should accompany the survey. There should not be any mention of the hypothesis being tested, if there is one. If persons are to receive a monetary incentive for their participation, this should be clearly stated in the letter. The monetary incentive should be acceptable to the prospective respondents for their participation and time. It should not make the prospective respondents feel like they are being coerced to respond to the survey. If there are sponsors of the survey (i.e., government agency, your specific university, nonprofit organization), this should be mentioned in the letter, as well as the names of your collaborators. The ways in which you plan to maintain the confidentiality and anonymity of the prospective respondents should be clearly described in the letter. The letter should mention how long the survey will take to complete and if the prospective respondents will be receiving other surveys; if so, note the time frame in which these surveys should be received. Along with the survey and cover letter, there should be two consent forms. The prospective respondents should be instructed to send back one of the consent forms along with the survey and to retain one for their records. The contents of what should be included in a consent form are described in Chapter 2, “Research Ethics.” A self-addressed, stamped envelope for returning the survey should be provided, as this is a way to increase the response rate. A more detailed discussion about how to calculate the response rate and why this is important to do so is mentioned in the “Response Rate” section of this chapter. A disadvantage of mailed surveys is that you cannot ensure that the person whom the survey was sent actually completed the survey. The possibility exists that he or she could have gotten another member of their household to do so. Mailed surveys are more appropriate for gathering sensitive information than interview surveys, and if persons are highly literate then they are preferable (Fowler, 2009).

Upon its return, each survey should be assigned an identification number (ID). These numbers should be assigned serially as the surveys are returned. The date

that the survey was received should be noted on each as well. According to Rubin and Babbie (2014), putting the date on the survey when it is received can help you determine if an extraneous event affected how the respondents responded to the survey. For example, let us say a researcher is interested in studying the effects of trauma on social functioning. During the third week of data collection a hurricane hits the area where the prospective respondents live. Knowing the date when the hurricane hit and when the survey was received will help you determine the effects of the extraneous event (i.e., the hurricane) on how the respondents responded to the survey.

It is important that another survey to be sent via the mail within 2 to 3 weeks after the original survey was sent. This is known as a **follow-up mailing**. The follow-up mailing is an effective way of increasing the response rate. Two follow-up mailings are deemed to be appropriate. For each follow-up mailing, you should include the cover letter, self-addressed stamped envelope, consent form, and survey.

Interview Surveys

Interview surveys are ones where trained interviewers read the questions to the respondents and record their responses. Given that the interviewer's presence could potentially affect the respondent's responses, the interviewer must be trained to not respond in the affirmative or negative to the respondent's responses. Additionally, the interviewer should be trained on how to administer the survey. Prior to administering the survey to a prospective respondent, the interviewer should role-play administering the survey to his or her supervisor. The supervisor should give feedback to the interviewer. The interviewer should not be allowed to interview a prospective respondent until the supervisor thinks he or she is ready to do so. Prior to conducting the interview, the interviewer should provide the prospective respondents with a consent form to sign and urge them to retain one for their records. In conducting the interview, the interviewer should read the questions on the survey exactly as they are written. Any modifications to the questions could result in the respondent not interpreting the questions as they were intended. In recording the responses to the open-ended questions, it is important that the interviewer record those words verbatim. Research has demonstrated that an interview survey is the preferred method to collect survey data from persons who may not be proficient in English, those who are not familiar using a computer, and persons who are not well educated (Fowler, 2009).

Telephone Surveys

Telephone surveys are ones in which prospective respondents are interviewed by a trained interviewer over the telephone. Prior to conducting the telephone survey, the interviewer should get the person's informed consent. The telephone numbers for the prospective respondents are selected via **random digit dialing** (RDD). RDD is a method of selecting individuals to participate in the telephone

survey by generating telephone numbers at random. RDD can be used to select both landline and cell phone numbers and ensures that the sample includes those who have listed and unlisted numbers. RDD is used to produce a representative sample of residential households. An advantage of conducting telephone surveys is that it is cheaper than conducting interview surveys.

Online Surveys

Online surveys are conducted via e-mail or websites. An advantage of online surveys is that they allow you to reach a large number of prospective respondents, and the administration of such surveys is relatively inexpensive. There are several online survey tools that can be used to design your survey, such as SurveyMonkey and Qualtrics. SurveyMonkey is a free online software and survey tool. It allows you to customize your survey, and templates of surveys are also available. You analyze the data using SurveyMonkey or export the data into other statistical software packages, such as Statistical Packages for the Social Sciences (SPSS) and STATA. SurveyMonkey allows you to use its mobile app (SurveyMonkey Genius) for designing, sending, and analyzing surveys. Once you have created your survey using SurveyMonkey, you need to enter the e-mail addresses of the prospective respondents, and they will receive an e-mail invitation to complete the survey. A consent form should be sent along with the survey. A disadvantage of sending an online survey is that individuals may not want to fill out the survey because they think it is spam e-mail. To prevent this from happening, you need to make sure you specify in the subject line who the survey is from. Online surveys are less costly compared to the other methods of survey data collection, and if persons are highly literate then they are preferable (Fowler, 2009).

Another online survey tool that can be used to design your survey is Qualtrics. Qualtrics is a subscription software for designing surveys, and collecting and analyzing data. Additional features include a Help Option on the menu bar in the right-hand corner of the screen; free training webinars; and a Qualtrics Community, an online community of Qualtrics users who are available to discuss their experiences with Qualtrics and provide you with help with your questions. Qualtrics can be accessed free of charge by students via their university, if the university has a subscription.

Response Rate

After the time for the administration of the survey is over, it is important that you calculate the response rate. The **response rate** is calculated by dividing the number of completed surveys by the number of surveys that were sent. Then you multiply the number obtained by 100. Let us say, for example, a researcher sent out 200 surveys and 80 were returned. The response rate is 40%. A response rate

of 70% has been deemed as acceptable (Johnson & Christensen, 2008). Mertens (2015) cautions researchers about accepting 70% as the acceptable response rate, as this response rate assumes the respondents and nonrespondents are similar. Therefore, she recommends that researchers determine if the respondents are representative of the target population. To determine if the respondents are different than the nonrespondents, one needs to assess if there are differences between the groups on demographic variables.

Application Checkpoint 12.3

Although the demographics of the persons who are receiving services at the center mentioned in the case example were not provided, think of some of the demographics in which respondents and nonrespondents may differ.

Increasing the response rate is a way of reducing the nonresponse bias. **Nonresponse bias** occurs when there is a significant difference between those who completed the survey and those who did not. There are several things that can be done to increase the response rate, including (1) contacting those who did not respond to the survey and inquiring if they received the survey—if they did not receive it, offer to send them another and remind them of when the survey is due; (2) avoiding sending the survey during the holidays, the beginning of school year, and at the end of the school year; (3) including a stamped self-address envelope so that the prospective respondents can return the survey; (4) offering monetary incentives; (5) making sure that your survey will not take too much time to be completed; and (6) offering to share the results of the survey with the respondents.

Ethics and Survey Research

Ethical surveying means that you do not violate any of the NASW Code of Ethics related to research and evaluation (Competency 1, *Demonstrate Ethical and Professional Behavior*). It is important as with any other type of research that you obtain informed consent from the prospective respondents and maintain confidentiality and anonymity. If the results of the survey are to be disseminated, it is important the data be presented in an aggregate—that is, for the entire sample or subgroups within the sample, rather than for a particular individual, whereby his or her responses might be identified. Researchers need to have procedures in place to protect the names of the respondents. The ID numbers should be on a list separate from the names of the respondents. These should be kept in two separate locked file cabinets, to which only the principal investigator has access. Prior to conducting surveys in schools, the researcher must obtain informed consent from the parent or guardian and assent from the child or adolescents, if they are not of

legal age. If you are conducting interview surveys and plan to record the respondents' responses, it is important that respondents be informed before the interview commences that he or she will be recorded. Mailed surveys, once returned, should be filed in a locked file cabinet, with only the principal investigator having access. All data derived from any method of survey collection must be destroyed according to your university's IRB-specified timeline. Analyzing any data after the IRB's specified timeline is unethical. Doing such may result in a researcher being terminated from his or her employment or the suspension of already approved studies.

Diversity and Survey Research

When conducting research with respondents whose primary language is not English, it is important that the survey be translated into their language (Competency 4, *Engage Diversity and Difference in Practice*). In translating the survey, you need to be concerned about linguistic equivalence, which is the extent to which a measure is compatible with the language and culture to which it will be adapted.

Decentering is a process in which the original items are translated. After comparing the original and translated items, the original items may be revised and then another translation is produced. This process continues until equivalent items are obtained in both languages. Decentering allows the wording in the original language to be modified when the grammatical structures produce an awkward version in the target language or when the concepts in the original are inappropriate, unknown, or lack an equivalent in the second language. Decentering is the optimal method for producing linguistically equivalent and culturally appropriate surveys because it does not make the assumption that the original language of the existing survey is the authoritative version. Decentering should not be used when translating a standardized measure, if it is part of the survey, because the wording of the items in the original language should not be changed.

SUMMARY, REVIEW, AND ASSIGNMENTS

CHAPTER SUMMARY ORGANIZED BY LEARNING OBJECTIVES

LO 12.1 Define survey research.

Survey research involves collecting information from individuals about specific topics using e-mails, interviews,

mail, questionnaires, or websites.

Information is collected about opinions, behaviors, attitudes, and beliefs from a specific group of persons.

LO 12.2 Differentiate between the types of errors that affect survey research.

Coverage error occurs when researchers do not have a complete list of names of the individuals in the sampling frame from which the sample is drawn.

Sampling error occurs when researchers survey a sample of the population instead of conducting a census.

Measurement error occurs when the questions on the survey are vague or ambiguous or when the questions do not include a response that all the respondents could possibly choose.

Nonresponse error occurs when all the prospective respondents did not respond to the survey.

Random error results in chance variations in individual responses around the actual (or “true”) values of what is observed for the group.

Systematic error is consistent, repeatable error associated with faulty measurement instruments or flawed procedures associated with the data collection.

LO 12.3 Differentiate between the types of survey designs.

A *cross-sectional survey design* is used when researchers want to collect data at one point in time.

A *longitudinal survey design* is used when researchers want to collect data at multiple points in time.

LO 12.4 Differentiate between the various methods of data collection via surveys.

Mailed surveys are ones that are mailed to the prospective respondents.

Interview surveys are ones where trained interviewers read the questions to the respondents and record their responses.

Telephone surveys are ones in which prospective respondents are interviewed by a trained interviewer over the telephone.

Online surveys are conducted via e-mail or websites.

LO 12.5 Identify the ethical and diversity issues associated with survey research.

If the results of the survey are to be disseminated, it is important the data be presented in an aggregate—that is, for the entire sample or subgroups within the sample, rather than for a particular individual, whereby his or her responses might be identified.

When conducting research with respondents whose primary language is not English, it is important that the survey be translated into their language.

KEY TERMS

Survey research 219

Sampling error 220

Census 220

Random error 220

Systematic error 221

Coverage error 221

Measurement error 221

Nonresponse error 221

Cross-sectional survey design 223

Longitudinal survey design 223

Open-ended questions 227

Close-ended questions 227

Double-barreled questions 229

Social desirability 229

Acquiescent response bias 229

Self-administered survey 233

Mailed surveys 233

Follow-up mailing	234	Random digit dialing	234	Response rate	235
Interview surveys	234	Online surveys	235	Nonresponse bias	236
Telephone surveys	234				

COMPETENCY NOTES

In this chapter, you were introduced to the competencies below:

Competency 1, *Demonstrate Ethical and Professional Behavior*. Social workers should disseminate the results of their survey research in the aggregate.

Competency 4, *Engage Diversity and Difference in Practice*. Social workers, when conducting survey research with respondents whose primary language is not English, should translate the survey items into the respondents' language.

ASSESSMENT QUESTIONS

1. How did the information in this chapter enhance your knowledge about survey research?
2. What specific content discussed in this chapter is still unclear to you? If there is

still content that is unclear, schedule an appointment with your instructor to gain more clarity.

END-OF-CHAPTER EXERCISES

1. Write a cover letter for the study proposed in the case example. Share it with one of your classmates and ask him or her to provide you with feedback on your letter.
2. Describe a research problem for which a mail survey would be best to collect the data as opposed to an online or interview survey. Justify your response.

ADDITIONAL READINGS

Baumgartner, H., & Steenkamp, J. E. M. (2001). Response styles in marketing research: A cross-national investigation. *Journal of Marketing Research*, 38(2), 143–156.

Blair, J., Czaja, R. F., & Blair, E. A. (2013). *Designing surveys: A guide to decisions and procedures*. Thousand Oaks, CA: Sage.

Dillman, D. A. (2007). *Mail and Internet surveys: The tailored design method* (2nd ed.). Hoboken, NJ: John Wiley.

Fink, A. (2017). *How to conduct surveys: A step-by-step guide* (6th ed.). Thousand Oaks, CA: Sage.

Ruel, E. (2019). *100 questions (and answers about) survey research*. Thousand Oaks, CA: Sage.



Get the tools you need to sharpen your study skills. SAGE Edge offers a robust online environment featuring an impressive array of free tools and resources.

Access practice quizzes at edge.sagepub.com/farmer

Do not copy, post, or distribute