

Qualitative and Quantitative Research Designs

CHAPTER

8

What You Should Know!

A long-standing debate among academic researchers is over what type of research is more acceptable, qualitative or quantitative. The debate about which form of research is more appropriate in criminal justice tends to pit theorists against applied practitioners. Interestingly, as the debate continues, one could argue that both have a place in criminal justice. Therefore, students should have enough knowledge to differentiate between the two types of research. After completing this chapter, the reader should be able to:

1. Compare and contrast quantitative and qualitative research.
2. Describe the types of field interviews, including structured, semi-structured, and unstructured interviews, and provide examples.
3. Describe focus groups and their uses.
4. Describe the different roles that may be used in field observation, including full participant, participant researcher, researcher participant, and complete researcher.
5. Explain the differences between qualitative and quantitative field observation.
6. Describe ethnographic research.
7. Describe sociometry.
8. Describe the types of survey research, including personal interviews, mail questionnaires, and telephone surveys.
9. Describe mixed methods research.

Because of its long-standing image as an applied social science, some criminal justice research conducted and published has had detractors. This is primarily the result of what is perceived as a lack of statistical sophistication. This perception is central to the continuing debate over what is more "academic," qualitative or quantitative research. This chapter examines research designs that are closely tied specifically to qualitative and quantitative research designs. The selection of a research design for a study should be based on the research questions and goals of the study.

Qualitative Research Design

"Qualitative researchers . . . are most interested in how humans arrange themselves and their settings and how inhabitants of these settings make sense of their surroundings through symbols, rituals, social structures, social roles, and so forth" (Berg, 2008, p. 7). Conducting qualitative research may be time consuming, but because it better reflects the actual being of something, the time factor is accepted as a given for the qualitative researcher. Therefore, the bigger issue becomes what method to use. This decision depends on the goals of the research and the source(s) of the information to be sought. When information is to be gathered directly from individuals, the most common method to use is field interviews.

Field Interviews

Interviewing involves one individual asking questions of another to obtain information. If the interview consists of specific questions for which designated responses may be chosen and numerical values assigned to the responses, then these qualify as quantitative research questions. For example, "Are you employed (Yes or No)?" is an example of a quantitative research question. Field interviews consist of open-ended questions. Open-ended questions do not have designated responses, and interviewees provide answers in their own words. During the interview, the response given by the interviewee is recorded exactly as stated rather than assigned to a predetermined category.

There is no one "right" way to conduct a field interview. However, asking the right questions is vitally important and more complicated than it may appear at face value. The questions included in the interview would be based on the type of interview being conducted and the information sought. Interviews may be (1) structured, (2) semi-structured, or (3) unstructured (Dunn, 2009). The type of interview is based on the level of control exerted by the interviewer, with structured being the most controlled and unstructured being the least controlled.

Structured Interviews

A structured interview entails asking every respondent preestablished open-ended questions. Responses are recorded as given, and the interview pace is such that

all the questions can be asked and answered in a timely fashion, but neither the interviewer nor the respondent feel rushed. Even though the structured interview has open-ended questions, it is not similar to a conversation because the interviewer is strictly asking questions and does not deviate from the script or respond to the interviewee's answers.

We recommend the following list of "do nots" as guidelines for conducting a structured interview:

1. Do not get involved in long explanations of the research.
2. Do not deviate from the study introduction, sequence of questions, or question wording.
3. Do not let another person interrupt the interview.
4. Do not respond for the person being questioned, suggest, agree to, or disagree to, an answer, interpret the meaning of a question, or improvise. It is natural human behavior to want to engage beyond a predetermined script, but by doing so, the benefit of the structured interview is lost.

The structured interview is geared toward limiting errors and ensuring a consistency of order in the responses even though the responses themselves may vary. This type of field interview also allows the use of multiple interviewers who are collecting the same information in the same manner, which the semi-structured and unstructured interviews are not able to guarantee based on their designs. On the other hand, even though the structured interview is designed to elicit rational, legitimate responses, it does not consider the emotional aspect. In conducting research in which emotional aspects play a role, a semi-structured and unstructured interview format might be more useful.

Semi-Structured Interviews

Semi-structured interviews are similar to structured interviews except that the interviewer has more freedom to go beyond the responses for a broader understanding of the answers. This follow-up to questions is known as "probing for more detail." Probing may consist of asking for more explanation of an answer

FROM THE REAL WORLD

Dantzker and McCoy (2006) used a structured interview to obtain information regarding psychological screening of police candidates from the 17 largest municipal police agencies and the Department of Public Safety in Texas. Once contact was made with the appropriate person, two basic questions of the structured interview were asked and the responses were recorded: (1) What psychologic protocol(s) are used to screen police applicants, and (2) what is the general content of the psychologic interview?

FROM THE REAL WORLD

Charles (2009) examined spirituality and law enforcement using semi-structured interviewing, designed to explore the expression of spirituality as revealed by officers in their work. This particular method of narrative inquiry allowed the participants to "tell their stories." The author asked the officers eight standardized, open-ended questions with the ability for the authors to ask additional probing questions.

1. When did you become a law enforcement officer and why?
2. Tell me your spiritual history starting with your parents.
3. Describe your spiritual practice.
4. Tell me about your work as an officer.
5. Has your spirituality influenced your work as an officer?
6. What has been most challenging to you while working in a profession where you are constantly exposed to human destructiveness and suffering?
7. How have you changed as an officer? How has your spirituality helped?
8. How do you cope with the human destructiveness and suffering encountered in police work? What is your support system when you are overwhelmed?

than has been given or following up with an additional question or questions depending on the answers given. For example, a study of fear of crime may include the question, "What increases your fear of crime in the neighborhood?" If the respondent answers "gang activity," then in a semi-structured interview, the interviewer could ask a probing (or follow-up) question, such as "What is it about the gang activity in your neighborhood that makes you afraid?" or "How does the gang activity in your neighborhood change your behavior?" In a structured interview, the interviewer cannot ask these questions unless they are already in the script. There will be times when a follow-up question is not readily apparent until a response is received. Semi-structured interviews allow the interviewer to follow up and collect additional information that would not have been collected with the structured interview.

Unstructured Interviews

The unstructured interview is far less rigid than either the structured or semi-structured interview methods. Often the interviewer may have topics that will be addressed and maybe some questions to start the interview process, but generally open-ended questions are created as the interaction proceeds (Adler & Clark, 2007). This style of interview is particularly useful when used in conjunction with participant observation or within an ethnographic study (both ideas will be discussed in subsequent sections). For example, to gain a

better understanding of what police detectives find stressful, a researcher chose to spend several days with detectives from a particular police agency. Although the primary role was to observe how detectives responded to certain situations or events during "down times" (e.g., ~~between calls, during meals, after the shift~~), the researcher was able to ask open-ended questions pertaining to what the detectives found stressful. One such question might be "What do you find stressful about being a detective?"

Because of the nature of an unstructured interview, the researcher must be able to complete several tasks for the study to be successful (Adler & Clark, 2007; Creswell, 2008; Dunn, 2009; Given, 2008; Maxfield & Babbie, 2009):

1. Gain access to the setting.
2. Understand the language and culture of respondents.
3. Decide how to present oneself.
4. Locate a contact or informant.
5. Gain the respondent's trust.
6. Establish rapport.

By meeting these requirements, the researcher should be successful in his or her efforts. Often times, more than one interviewer is involved in a project, and personality characteristics can dictate if an individual is appropriate as an interviewer. When acting as unstructured interviewers, researchers must be able to think quickly on their feet and assess the information provided to develop the next question.

Several problems may arise that could affect the outcomes of structured, semi-structured, and unstructured interviews. One possible error is the respondent's behavior; for example, is the respondent being truthful or only saying what he or she believes the interviewer wants to hear? Another factor is the setting of the interview. For example, the interaction dynamic is different between face-to-face and telephone interviews in that the telephone interviews are less personal. A third factor is question wording. If the questions are confusing or uncommon terms are used, then this factor may decrease the amount as well as the accuracy of information provided. For most people, performing interviews is not intuitive and requires training, which can include directions to clearly enunciate or not change the wording of questions. Finally, if an interviewer is not familiar with the respondent's background, culture, education, or other factors, this unfamiliarity can be detrimental to the interview.

Focus Groups

Perhaps the best way to define a focus group is the interviewing of several individuals in one setting. Although not meant to replace individual interviews, focus groups have long been used in marketing and politics (Given, 2008). Movie studios may use focus groups to determine the final editing of a movie or the marketing strategy. Focus groups are convened during presidential debates to assess

subjects are not changing in response to knowing they are being watched. However, the full participant method is impacted by ethical and moral dilemmas that could adversely affect the research if the wrong decision is made, such as having to compromise one's beliefs or even place a researcher in legal jeopardy (e.g., being present during the commission of a crime). To avoid ethical and moral dilemmas (discussed in Chapter 2), a researcher may decide to adjust the method to eliminate the use of deception; thus, his or her identity is known, and the researcher become a participant researcher.

The Participant Researcher

Participating in the activities of research subjects can offer insights and information not attainable through other forms of research and may also avoid ethical dilemmas facing full participation. As a result, the participant research method may be a preferable option. This method involves the researcher participating in the activities of the research environment with the full knowledge of the research subjects. For example, to study the behavior of males in a reformatory, the researcher goes in and participates in all activities, but everyone knows he is there collecting information. The biggest negative of this research method is the possibility that subjects' behavior may be influenced by their knowledge of the researcher's role. The subjects may not act as they would under unobserved conditions, either over-exaggerating or under-exaggerating their actions. This modified subject behavior is known as "subject reactivity." If you are filming children playing (with the permission of their parents of course), you will observe firsthand subject reactivity. Once they realize they are being filmed, some children hide from the camera and others show off and mug for the camera.

On a serious note, by being part of the activities, the researcher can influence or even create outcomes and behaviors that may not have existed without his or her presence. Using the example of observing within a male reformatory, the inmates may be better behaved because they know they are being observed.

Researcher Participant (The Researcher Who Participates)

Rather than taking part in activities, the "researcher who participates" method requires nothing more than observation by the researcher whose status as a researcher is known to the research subjects. For example, to study whether a particular treatment offered to incarcerated juveniles is working, the researcher enters the environment where his or her status as a researcher is known, but does nothing more than observe. Although this method eliminates many of the problems of the previous two methods, the mere presence of the researcher who participates can still influence behavior and activities, but may do so to a lesser degree. The participant researcher and researcher participant can be viewed as being on a continuum with the identity being known for both, but with the participant researcher having more interaction with the environment and subjects than the researcher participant. The first word (participant or researcher) keys into the top priority of the observer.

The Complete Researcher

The way for a researcher to minimize the problems generally associated with observation research is to avoid all possible interaction with research subjects. Data collection may involve covert methods of observation, such as a disguised vantage point. Within a prison, a guard tower in a maximum level prison could provide this disguised vantage point. Cameras provide another disguised vantage point and are fairly typical in our public life, and we are often unaware or unconcerned that we are being filmed. The benefits that are gained by covert observation or assumption of a noninteracting role are countered by possible resentment and denial of access by those being observed, who may feel that they are being spied on and seek to protect their privacy. One drawback for the complete observer is the inability to interact with the environment or subjects to learn more about what the observer is seeing.

Regardless of which form is used, field observation can be time consuming and may not provide the results ultimately sought. Still, it can be a useful method for gathering data that may not be available through another method. Field observation can also provide context that other types of research designs are not able to provide.

Ethnographic Research

Ethnographic research is the study of people and cultures for the purpose of providing a detailed and in-depth description. It typically involves a combination of field interviewing and field observation methods in varying degrees. Attributes of ethnographic research include exploration of the nature of

FROM THE REAL WORLD

To study the implementation of community policing, Memory (1999) conducted research as the "researcher as participant." His methodology took the form of ride-alongs, where he spent 180 hours riding with police officers from selected cities or counties. Departmental contact persons arranged the ride-alongs ahead of time. Because six law enforcement agencies had agreed to be involved in a larger overall research project, the researcher did not need to "gain access" but still had to comply fully with agency and officer directions to maintain access. Memory rode during both daylight and darkness in each jurisdiction but rode very little between 1:00 a.m. and 1:00 p.m. As a researcher as participant, he dressed in slacks, a dress shirt, and a sport coat. He observed everything that occurred concerning the officers with whom he rode. The data collection involved taking notes on the front and back of data-collection forms. The researcher recorded observations, words of officers and citizens, and his own impressions and ideas.

As with observation and ethnography, the researcher's presence, attitudes, and biases can influence the outcomes of sociometric research. Because the mere presence of the researcher can be problematic, a less obtrusive means of conducting qualitative research would be to use records, such as interview 911 calls.

Quantitative Research Design

Quantitative research provides a means of describing and explaining a phenomenon through numerical findings (Berg, 2008; Fowler, 2009; Maxfield & Babbie, 2009). A variety of designs are available to criminologists for conducting quantitative research. Yet, despite all the possibilities, one form of research is both a research method and a research tool: the survey. Because of its dual nature, it is discussed here as a quantitative research design and later in Chapter 10 as a data collection device.

Survey Research

The survey is one of the most popular research methods in criminal justice. The survey design is used when researchers are interested in the experiences, attitudes, perceptions, or beliefs of individuals or when trying to determine the extent of a policy, procedure, or action among a specific group. Most often a researcher contacts a sample of individuals who are presumed to have participated in a particular event, who belong to a certain group, or who are part of a specific audience having experienced similar events. Of the identified group, certain questions pertaining to the topic under study are asked, either verbally or in written form. The solicited responses to the questions comprise the data used to test the research hypothesis. The three primary survey methods are (1) personal interview, (2) mail questionnaire, and (3) telephone survey.

Personal Interviews

Personal interviews are surveys administered by face-to-face discussions between the researcher and the survey respondent. The researcher reads from a previously developed questionnaire to which responses are numerically assigned. Such interviews may in fact be nothing more than the reading of a questionnaire that could have been mailed out to respondents. Personal interviews permit the researcher to obtain not only responses to the questions asked but observations as to the respondents' demeanor and nonverbal reactions. For example, in a study of criminal behavior, the interviewer could assess the subjects' level of discomfort using a scale of 1 (comfortable) to 10 (uncomfortable) to questions regarding recent theft behaviors. They are, however, more costly and time consuming and less safe than other strategies that do not bring researchers into physical contact with respondents.

Mail Questionnaires

Mail questionnaires are survey instruments mailed to selected respondents to complete on their own rather than being directly interviewed by the researcher. They are much cheaper and safer to administer. In addition, they enable researchers to survey large numbers of people quickly and easily. During the last census, someone in your household received the questionnaire, completed it, and mailed it back. If a response is not received, then an in-person, residence visit is completed by a census-taker.

Mail questionnaires may be administered in three ways. Typically, the questionnaire may be mailed with a request for it to be completed and returned in a self-addressed stamped (or metered) envelope to the researcher. Additionally, the researcher may drop off the questionnaire in a face-to-face contact with the respondent with the request that it be mailed back or mail the questionnaire and advise that he or she will come by at a later time to retrieve it. Either of the latter two strategies greatly increases the time and cost involved in conducting the survey; however, the third method can be viewed as an attempt at intimidation and receive a negative response. Technological advances have impacted the mail questionnaire. If you have been shopping recently, then you may have received instructions on your receipt for filling out a survey by logging into a website in return for the possibility of winning a prize for participating, such as a gift certificate. A particularly attractive benefit to having subjects respond electronically is that the data are automatically entered into a computer.

Telephone Surveys

Telephone surveys are popular because they are quick and easy to do, enabling the researcher to contact large numbers of people in an efficient manner. They are safe in that verbal abuse or disconnections are about the worst that researchers can incur from their dealings with respondents. Telephone surveys that use computer-generated random digit dialing to sample the population may be more efficient. If you have received a phone call and heard silence before someone came on the line, then the company is probably using random digit dialing. A computer dials the numbers, and a human only joins a call when someone answers. This technology offers the added advantage of inputting data into a computer as the surveyor asks the questions. The biggest disadvantage is that people who are sick of telephone solicitors often refuse to participate or do not answer the phone.

Pros and Cons of Survey Research

Two reasons why the survey design is popular are (1) survey research makes it feasible to use large samples and (2) this design uses standardized questionnaires, which from a measurement perspective offers strength to the data because the same question is being asked of all respondents, thus giving credence to the same response from a large number of respondents.

Despite these positives, the survey design also has its share of negatives: (1) a standardized questionnaire is limited with respect to whether the questions are appropriate because it is designed for all respondents and not for a select group; (2) it can seldom account for the contexts in which respondents are thinking or acting; (3) survey research is inflexible in that it typically requires that no change occur throughout the research, so that a preliminary study may be needed to guide research design; and (4) the survey tool is often subject to artificiality.

Even with these negatives, the survey design remains one of the most popular methods for conducting research. Furthermore, it is an extremely popular tool for collecting data. The issues involved in conducting survey research are discussed in more detail in a subsequent chapter.

Quantitative Field Observation

Previously, field research was discussed as a qualitative research method. That discussion indicated that such research may also be quantitative in nature. When field observations are made allowing for numerical assignments, this method involves quantified field research. If the local police department is observing

FROM THE REAL WORLD

Standardized field sobriety tests (SFST) were developed during the 1980s to enable traffic officers to estimate accurately drug and alcohol impairment. These SFSTs consist of Walk-and-Turn, One-Leg Stand, and Horizontal Gaze Nystagmus. Traffic officers in all 50 states have been trained to administer these tests to individuals suspected of impaired driving and to score numerically their performance on them. It has been claimed that the SFST test battery is valid for detection of low blood alcohol concentrations and that no other measures of observation offer greater validity for blood alcohol concentrations of 0.08% and higher (National Highway Traffic Safety Administration, 1999).

To study the legitimacy of these claims, Burns and Dioquino (1997) set up a field research in Pinellas County, Florida. Eight sheriff's deputies with years of experience in traffic control, each having made hundreds of driving-under-the-influence arrests and all having extensive training in driving-under-the-influence enforcement including certification in SFST, were selected to participate. A rigorous observation procedure was established in which both officers and observers assigned to each officer carefully recorded the SFST scoring and the actual outcome of measured blood alcohol concentrations. A total of 379 traffic stops were evaluated. In 313 cases SFSTs were administered. Drivers refused to take breath tests in 57 of these cases. In 256 cases, a breath test was administered to verify the accuracy of the SFST. The traffic officers were found to have an accuracy level of 97% in their arrest decisions based on the use of SFSTs.

reactions to candidates' statements. The focus group is an information-gathering method in which the researcher-interviewer directs the interaction and inquiry. This process can occur in either a structured (e.g., pretesting a questionnaire) or unstructured (e.g., brainstorming) manner. In either case the researcher-interviewer must meet the same guidelines offered for conducting any interview.

The use of focus groups has advantages and disadvantages. The advantages include limited expense and flexibility. The disadvantages include group culture, dominant responder, and topic sensitivity (Adler & Clark, 2007; Creswell, 2008; Dunn, 2009; Given, 2008; Maxfield & Babbie, 2009). The focus group can be a useful qualitative method for gathering interesting information.

Field Observation

Field research typically entails interviewing or observation or a combination of both. The method of observation allows researchers to actually perceive the phenomenon under study using their own senses, such as sight, sound, and smell, rather than relying on subjects to relate their perceptions. It is more likely to be the method for a qualitative study but may also be used within a quantitative study (discussed in a subsequent section). For example, if the purpose of a study is to determine social interactions on the street, then a researcher could actually observe these interactions firsthand. Although this method of qualitative research has not received the same attention as interviewing (Adler & Clark, 2007; Dunn, 2009), it is still a viable tool, especially in criminal justice and criminology. Qualitative field observation aims to describe concepts and ideas rather than developing a numeric assessment, which would be quantitative field observation (this topic will be discussed in a subsequent section).

The role of the observer in field observation differs based on the amount of interaction the observer has with the environment and subjects as well as the level of deception employed regarding the observer's identity and purpose. There are various methods for categorizing observing methods, but one that takes into account the level of both interaction and deception includes four types: (1) full participant, (2) participant researcher, (3) researcher participant, and (4) the complete researcher (Senese, 1997). Keep in mind that these broad categories actually include a range of behaviors within these constraints.

The Full Participant

Sometimes it may be fitting or perhaps even essential that a researcher become part of the study. The full participant method allows the researcher to carry out observational research, but does so in a "covert" or "undercover" manner. This particular method is both high on the level of interaction as well as deception. For example, to study the workings of a gang, the researcher takes an active role as a gang member, but the other gang members are unaware that the individual is actually observing for the sake of research. The full participant method increases the likelihood of acquiring accurate information because

particular social phenomena, a tendency to work primarily with unstructured data, the investigation of a small number of cases, and data analysis involving explicit interpretation of the meanings and functions of human actions (Berg, 2008; Creswell, 2008). The product of such a study is in-depth descriptions (Given, 2008).

Ethnography is labor intensive and not a widely used method of conducting research; however, it can provide insights not found through quantitative research. For example, the study of gang graffiti from a quantitative perspective might simply identify the differing types of symbols drawn and the number of each. However, an ethnographic study could provide what the symbols mean, why they have been drawn in specific places, and who is placing them. This information provides additional detail to the information collected in a quantitative approach. An interesting aspect of ethnographic study is the possibility for the researcher to examine social interactions, which leads to another form of qualitative research: sociometry.

Sociometry

Sociometry is a technique by which the researcher measures social dynamics or relational structures within a specific environment (Berg, 2008; Creswell, 2008; Givens, 2008). Information can be gathered through interviews or by observation and indicates the subjects chosen for participation and characteristics of those who do the choosing. The lunchroom of a middle school would provide an ideal setting for a study using sociometry. The study may examine the interactions between students, such as who sits together and how seats are chosen. With respect to criminal justice, a sociometric study might involve prosecutor–defense attorney relationships, where the researcher observes the interaction of prosecutors with defense attorneys noting how each treats and is treated by the other and how these interactions affect outcomes, such as plea bargains. This study might show whether there is a hierarchy among lawyers or among potential defendants (the accused).

FROM THE REAL WORLD

Harpster, Adams, and Jarvis (2009) examined verbal indicators to analyze 911 homicide statements critically for predictive value in determining the caller's innocence or guilt regarding the offense. They listened to 100 audio recordings and transcripts of 911 homicide telephone calls obtained from law enforcement departments throughout the United States formulating the linguistic attributes of these communications and identifying variables that they then analyzed for association with the likelihood of the caller's guilt or innocence regarding the offense of homicide.