Chapter 3: Part 2

Collecting Data on Sexuality

Up to this point we have discussed hypotheses and variables. An hypothesis states how the researchers expect variables to be related at the conceptual level. Variables such as sexual arousal, gender, and attitudes toward rape are each concepts. In a study, however, researchers must decide how concepts will be translated into concrete manipulations and measures. That is, each of the variables needs to be *operationally defined*.

For example, earlier we discussed a case in which researchers were interested in the effects of exposure to pornography on men's attitudes toward women. In that example exposure to pornography was operationally defined as watching certain sexually explicit video clips in the laboratory. Attitudes toward women would probably be operationally defined as answers to a paper-and-pencil questionnaire regarding attitudes about women. Notice that researchers are interested in how concepts such as pornography and attitudes are related, yet they are faced with translating those concepts into manipulations and measures that are feasible given their resources.

Typically, researchers measure or operationally define their variables in way that rely on self-reports from research participants. Sometimes, researchers are able to measure more directly peoples' sexual responses. However, both types of measures have advantages and disadvantages.

Direct Measurement of Sexual Response

Researchers can measure directly the physiological arousal or response associated with sexual stimuli. These methods of gathering data typically are carried out in a laboratory because certain equipment is needed. Specifically, data on male sexual response is typically gathered using some form of strain gage. The loop is placed around the base of the penis to form a snug fit. Then, as the penis becomes increasingly erect, the expansion in the circumference of the base of the penis stretches the loop. The degree to which the loop is stretched is recorded by a computer connected to the strain gage via wires. Note that because penises vary in size, the strain gage has to be calibrated to each research participant. Baseline measurements are obtained for the participant's penis in a non-aroused state as well as at the point of full erection. Then, during the experiment, the researchers are able to determine how relatively aroused the research participant at any point.

To measure female sexual arousal and response, researchers typically use a vaginal photoplethysmograph, which consists of a clear acrylic device about the same size and shape as a menstrual tampon. Inside the photoplethysmograph is a light source and a photo-cell. The photoplethysmograph is inserted inside the research participant's vagina and, just as with the penile strain gage, the photoplethysmograph has wires running from it to a computer. The photoplethysmograph continuously sends data to the computer regarding how much light is being reflected off of the walls of the vagina. As the research participant becomes increasingly sexually aroused, the walls of her vagina become engorged with blood, and less light is reflected back to the photoplethysmograph. Note that just like the penile strain gage the photoplethysmograph provides data as to how relatively aroused the research participant is compared to that individual's baseline measures, but it does not give an absolute measure of sexual arousal that can be compared to other research participants.

Research based on physiological measures of sexual response makes up only a small proportion of research on sexuality, probably for several reasons. For one, physiological measures of sexual response are relevant only to certain research questions (e.g., factors related to sexual dysfunction or sexual response to deviant images). Also, this method of collecting data requires specialized equipment and expertise, as well as research participants who are willing to engage in the highly unusual behavior of having their sexual response monitored by strangers. An alternative method for collecting data is observations made by researchers.

Observations of Behavior

Direct observation of sexual behavior is problematic for several reasons. Doing so without peoples' knowledge and consent is illegal, and those people who allow researchers to observe them are likely to be unrepresentative of the general population. Even volunteers would probably act differently while being observed than they would in private. There are instances in which direct observation of behavior is possible and useful, but when?

Some behaviors related to sexuality are public, such as flirting with new acquaintances in a bar or displaying affection for a mate. Indeed, researchers have studied these and other topics through direct observation, and we will discuss the findings of that research at various points later in this book. In such instances, researchers are said to conduct *field research* in that the researchers go out to where people live rather than requiring research participants to come to the researchers. The primary advantage is that researchers are able to observe how people actually behave in real-life situations, especially if the researchers are observing in such a way that the research participants do not know that their behavior is being observed. The primary disadvantage is that there are only a limited number of topics that can be studied through direct observation, especially if the process of observation is to remain hidden from the people being observed. Also, observational researchers are left with only what they can see and hear–the perspective of the research participant is missing.

Participant observational research attempts to overcome the primary disadvantages of basic observational research. Here the researcher does not remain an outside observer, but rather observes others' behavior through joining and interacting with the research participants. Anthropologists studying cultures other than their own commonly employ participant observation by immersing themselves in the culture they are studying. Taken to an extreme, a researcher interested in studying prostitution would become a prostitute and/or a customer. Participating in the culture allows the researcher to build trust with the research participants, talk with participants about their experience, and have first-hand experiences upon which to reflect.

Participant observation has some distinct advantages, yet it also entails important disadvantages. By becoming immersed in the culture one is studying, the researcher runs the risk of losing objectivity. Sometimes observational researchers come to love the culture they have joined and begin viewing their new culture through rose-colored glasses, a phenomenon researchers refer to as "going native." Also, as a researcher becomes a member of the culture he or she is studying, certain cultural limitations will be placed on the researcher because of his or her gender, age, sexual orientation, and so forth. So, for example, male researchers probably would not be allowed to participate in the process of women giving birth or gossiping among themselves, and a female researcher probably would not be allowed to participate in male rituals or hear men gossiping among themselves.

Observational research is very labor intensive. Plus, there are limits to the topics than can be studied effectively. Surveys are an alternative method for collecting data on sexuality.

Survey Research

The most common way to gather data on human sexual behavior and attitudes is through surveys. Surveys are based on asking people questions about their behavior and attitudes, and tallying the responses, typically from large groups of respondents. Still, surveys vary in the extent to which respondents interact with researchers and are anonymous. At the most anonymous end of the continuum, potential research participants are mailed or handed a questionnaire, and are asked to return it after completion by mailing it back to the researchers or placing it in a box containing other completed questionnaires. Because the questionnaire does not ask the respondent to identify him- or herself, and the completed questionnaire is returned in such a way that the researcher cannot identify whose questionnaire is whose, the questionnaire is said to be completely anonymous.

People are most likely to respond accurately and honestly under completely anonymous conditions. However, there are disadvantages to the anonymous questionnaire. Because the respondent does not interact with the researcher, there is no opportunity for either the researcher or the respondent to ask for clarification. If a research participant does not understand a question or a word, he or she is left to guess. If a researcher is faced with a respondent's answer that does not seem to make sense, or conflicts with other answers the respondent provided, there is no way to clarify. Also, people may be less motivated to participate in research when it is easy to throw away the questionnaire rather than fill it out.

To handle these disadvantages, some survey researchers employ trained interviewers to ask questions of research participants. These interviews may be conducted over the telephone or in person (face-to-face). Interviews allow the researcher to have more control, but there are disadvantages. Even if the identity of research participants is not recorded, respondents may not feel anonymous because they are revealing sensitive information directly to a stranger (who does know who the respondent is, at least at the time of the interview). In an attempt to handle this loss of anonymity, some sexuality researchers have used computers to conduct interviews. The computer presents the questions on the screen, a voice reads each question for the respondent, and there are help windows if the respondent should need clarification. The respondent completes the interview in private at his or her own pace.

In summary, there are different methods for collecting data regarding human sexuality. Each has distinct advantages and disadvantages, which are summarized in Table 3-1. Because most sexuality research is based on surveys, and surveys are based on peoples' self-reports, it is important to evaluate the factors that may influence self-reports. In discussing anonymous questionnaires versus interviews, we saw that the methods researchers use to gather self-report data may influence the answers research participants provide. To become savvy consumers of sexuality research, it is important to become familiar with the primary factors that may influence peoples' self-reported behavior and attitudes.

Self-Reports of Sexual Attitudes and Behavior

When researchers ask people about their sexuality, either through interviews or questionnaires, there are several factors that can influence responses. Of course, one of those factors is the respondent's actual sexual attitudes or experiences (whichever one is being asked about), and ideally this would be the only factor affecting responses. If this were the case, researchers could rest assured that people's responses to their questions reflect those respondents' actual attitudes or behavior. Unfortunately, researchers have documented that participants' responses are affected by several other factors, besides their attitudes or experiences, and these other factors have been lumped together under the terms *response bias* or *reporting bias*.

Although the forms of response bias are numerous, we will consider the few most troublesome and the ones we should consider when examining any example of sexuality research. First, we will address the primary reasons research participants may not provide perfectly accurate answers to researchers' questions, even when they try.

Memory and Recall

Suppose researchers presented the following question to respondents: "With how many different partners have you had vaginal intercourse during your lifetime?" Who would most likely be able to provide an accurate response? Probably those respondents who have never had vaginal intercourse, or who have had one, two, or three partners, would easily be able to recall the exact number of partners.

Now consider a respondent who in actuality has experienced vaginal intercourse with 16 partners over a span of 30 years. Some of these partners were long-term relationship partners and some were casual sexual affairs or "one-night stands." Imagine that this respondent first had vaginal intercourse at the age of 17 and is now 47 years of age (a sexual history spanning 30 years). Suppose that this person has been married since age 29 and has not had sexual intercourse with anyone outside of marriage. So, this person accumulated 15 of the total 16 partners between the ages of 17 and 29, a period that ended 18 years ago! How likely is it that, when confronted with the research question posed above, this individual will be able to recall exactly 16 partners, especially when the respondent will probably only spend a second or two arriving at an answer?

Consider a second type of example: "How many times during the past 12 months have you used your mouth to stimulate a partner's genitals?" We can imagine that someone who had not performed oral sex during the past year or so would easily produce an accurate response (0 or "none"). However, what about respondents who have had several recent partners or who have had only one partner with whom they have had on ongoing sexual relationship over the previous year? Certainly it is unrealistic to expect that these respondents could remember each instance of oral sex, even if highly motivated and given enough time to try.

How do respondents produce answers to these types of questions about their behavior when it is impossible to recall and count every actual instance of the behavior? In the end, most respondents estimate their experience, and respondents do so in different ways depending on the frequency and regularity of the behavior about which they are being asked. For example, in response to the number of sex partners question, respondents with several partners are liable to give a round, "ball-park" estimate. Respondents with more than about 10 partners typically

provide numbers that end in 0 or 5 (e.g., 10, 15, 25, 30, 50, 75, 100). Researchers who compute the average number of reported partners and compare groups (e.g., men compared to women) will end up with averages that look precise (e.g., 4.13 versus 2.27) yet are based on a substantial proportion of respondents who provided global estimates.

Considering responses to frequency questions such as the oral sex question posed above, it appears that people who have had numerous such experiences go through a reasoning process to arrive at an estimate. The thinking of one hypothetical respondent might go something like this, "Well, my partner and I typically have sex about twice a week or so, and I perform oral sex about half of those times. There are 52 weeks in a year, so I guess I performed oral sex about 50 times during the previous 12 months." The entire line of thinking may only take a second or two. Notice that the respondent does not even attempt to remember each instance because doing so is impossible. How accurate the resulting estimate is depends on how regularly the respondent engages in the behavior as well as the accuracy of his or her recall (or estimation) of that typical frequency. Minor exceptions (e.g., that week the respondent was on vacation or was ill or was fighting with the partner) are typically not factored in when arriving at global estimates.

Degree of Insight

Now that we have examined the inherent recall problems in asking people to report accurately on their own behavior, consider how people might attempt to answer the following sexuality questions, and how accurate their responses might be.

1) *During what proportion of sexual contacts was a condom used?*
2) *How did you feel during your first experience of sexual intercourse?*
3) *How comfortable are you communicating your desires to a sexual partner?*
4) *At what age did you first stimulate your own genitals for pleasure?*

Each of the questions in this list are heavily dependent on the respondent's memory, yet they also vary with regard to the degree of insight the respondent needs to have into his or her own mental processes. For example, the second and third questions require insight into one's emotions whereas the first and last questions do not. Conceivably, people who are generally less introspective (less aware of their own feelings and thoughts) will probably have greater difficulty answering the second and third questions, and be more prone to providing inaccurate answers.

Now consider questions that require an even greater degree of introspection: "Why did you decide to have sexual intercourse with your current partner that first time that you did? Why did you fall in love with your most recent partner? Why did you break-up with your most recent partner?" These questions not only demand recall (memory) but also a great degree of insight into one's own motives and the factors that led to particular emotions and decisions. Humans may not have good insight into these mental processes. This is liable to be true especially with complex feelings and decisions like the ones asked about here.

\When asked questions about their motives or decisions, people do readily provide responses. "I felt pressured." "He was the kindest person I had ever met." "We were no longer communicating and just grew apart." These are typical answers people might give to the three questions posed at the start of the previous paragraph, yet how well do they capture all of the complexity that went into decisions to engage in sexual activity with someone for the first time, or the experience of

falling in love, or the difficult decision to end a meaningful relationship? It may be that people provide such answers based on stereotypes or beliefs they hold regarding the causes of relationship events. These stereotypes or beliefs may or may not accurately reflect what occurred within the respondent's individual life.

Motivation and Social Desirability

Up to this point we have been talking about problems in accuracy of recall and degree of insight that occur because of the limitations of the human brain, even when motivation and honesty are high. There are also forms of response bias that arise from low motivation to produce accurate responses, or motivation to present oneself in a certain light.

First, considering lack of motivation, it is fair to ask, How motivated are respondents when called randomly on the telephone to participate in a brief (or not so brief) telephone interview? Or, how motivated are respondents who are participating because of the requirements of a college course they are taking? In contrast, might motivation be higher if participants are paid a substantial amount of money for participating, or if they are participating so that they will have access to clinical services (e.g., perhaps they are being screened to see if they qualify for a study involving some form of sex therapy)?

There are no definite answers to these questions, but it is important to question the extent to which participant motivation might affect responses. Also, respondent motivation is liable to vary across participants within any given study. There also may be differences between those who do not answer some questions in a sexuality survey and those who answer all questions. For example, those individuals who omit answers to some sexuality questions have been found to be older, more conservative, and less sexually experienced compared to people who answer all the items in a sexuality questionnaire.

In addition, some respondents in sexuality studies may distort their responses, consciously or unconsciously, to present themselves in a positive light. For example, if a respondent who has had several sexual partners believes that greater sexual experience is something to be proud of, she or he may tend to overestimate the lifetime number of sex partners. In contrast, if a respondent feels ashamed of something sexual from his or her past, the respondent may not remember or admit this experience in an interview or on a questionnaire. Researchers refer to these types of distortion as *social desirability response bias*, and such bias may even differ as a function of whether the interviewer is the same or other gender as the respondent. The degree to which respondents believe their answers are anonymous can also alter the degree to which responses are tainted by social desirability response bias.

Besides conscious distortion or deceit in people's sexual self-reports, there are unconscious forms of response bias. In a fascinating example, college women were randomly assigned to two conditions, each involving visualization of the faces of two people known to the participant. In one condition the women were asked to picture the faces of two acquaintances on campus whereas in the other condition participants were asked to visualize the faces of two older members of their own family. All of the women were subsequently presented with the same sexual story and asked to rate their response to it. Interestingly, those women who had been asked to visualize family members rated the sexual stories less positively than did the women in the other condition. Why? Although we cannot be sure, it is likely that the internal "presence" of

the family members led the women to respond more in line with what would be expected by the family members. In a sense, the women's responses were distorted (perhaps unconsciously) by what they had focused on prior to providing their ratings.

We have seen that there are several reasons that the responses research participants give to questions about their sexuality may be inaccurate. These include constraints on memory, inaccessibility to one's own motives or other mental processes, degree of motivation, and tendencies to distort (intentionally or unintentionally) one's responses to be consistent with an image of the self that one wishes to portray. So, research in which respondents have an incentive to participate, are asked direct questions about their behavior over short periods of time, and are assured of anonymity should produce more credible results than research in which participants have little incentive, are asked questions about their behavior over long periods of time or their feelings or motivations, and are unsure of their anonymity. Thus far, the forms of response bias we have focused on involve factors related to the respondent. There are, however, aspects of the research itself that may result in response bias.

Question Wording and Terminology

To elicit respondents' self-reports, researchers must rely on words, either spoken or printed, to form the questions. The problem is that any time we use words there is the possibility for misunderstanding. Can the researcher be sure that the words used in an interview or a questionnaire have the same meaning to all respondents as they do to the researcher? Researchers often take great care in choosing the wording for questions, sometimes trying them out on a small sample to work out any problems before actually conducting the study (often referred to as "piloting the questions" or conducting a "pilot study"). For example, would respondents know the meaning of formal sexual terminology such as *fellatio* (performing oral sex on a male) and *cunnilingus* (performing oral sex on a female)? Despite care in question wording, it is easy for different meanings to arise. Consider the following questions:

1) *How many sex partners have you had during your lifetime?*
2) *How often have your and your partner engaged in sex during the past month?*
3) *Have you ever forced someone to have sex against their will? (Or, have you ever been forced to have sex against your will?)*
4) *How often do you experience sexual desire?*
5) *How frequently do you masturbate?*

Chances are that if confronted with these questions in a survey, you would generate answers quite readily, especially if a scale was provided for you to indicate frequency. However, other respondents may interpret the meaning of certain words differently than you do. In the first three questions, what does the term "sex" mean? If you are heterosexual, you are liable to interpret "sex" to mean vaginal intercourse. To many heterosexual individuals, if there was not a penis moving around inside a vagina, there was no "sex." However, others will interpret "sex" to include oral or manual stimulation of the genitals. How does anal intercourse figure in?

What about lesbian women? Heterosexual definitions of sex rely on the involvement of a penis, and episodes of sex typically are marked by ejaculation from that penis. So, if heterosexual couples are asked the second question ("How often have you and your partner engaged in sex during the past month?"), responses will likely be based on the number of times the man in each

couple ejaculated after having been inside his partner's vagina, regardless of the number of orgasms each woman did or did not have. How might lesbian respondents arrive at an answer to the same question? Would the question even have meaning for such respondents?

In the above list of questions, how might the terms *partners, forced, sexual desire*, and *masturbate* be interpreted by different respondents with different histories, different upbringing, different religious values, and so forth? Does the term *partners* include every individual with whom one has had any sexual contact, or only those individuals with whom one also shared an emotional relationship? How strong does the experience of sexual desire have to be to count? What about a fleeting sexual thought or fantasy? What qualifies as force in a sexual situation?

The last question in the list above had to do with masturbation. We intentionally chose this term to demonstrate that some sexual words elicit a stronger emotional reaction than others. Imagine being confronted with the question "How frequently do you masturbate?" versus "How frequently do you stimulate your own genitals for sexual pleasure or release?" Is the second question less threatening and easier to answer? What if the question had been preceded with a statement about masturbation being a common experience? Referring to a particular behavior (e.g., masturbation) as relatively common may lead respondents to be more likely to admit having performed the behavior themselves. When examining the results of a sexuality study, we need to be sensitive to the questions and terminology that were presented to respondents because these are liable to have a substantial effect on the answers the researchers received..

Context Effects

When people respond to questions in a questionnaire or interview, they do not respond to each question in a vacuum. That is, respondents consider the questions that came before and after a particular question when trying to determine what the researchers mean by the question. The impact of certain questions on other questions in the same study is referred to as *context effects*. For example, if respondents are asked to rate their degree of satisfaction with their relationships, and that question was preceded by a series of questions about sexual relationships they had, respondents are liable to interpret the satisfaction question as referring to their *sexual relationships*. In contrast, if the same satisfaction question had been preceded by a series of items having to do with family relationships, respondents might be more likely to assume that the satisfaction question had to do with familial relations.

Context effects can also influence how people evaluate their attitudes or feelings. Because respondents typically provide the first appropriate answer that comes to mind, previous questionnaire or interview items may influence responses to a current question because those previous items called to mind particular experiences, attitudes, or feelings. For example, suppose that researchers ask respondents to rate their overall satisfaction with life. If this item is preceded by several items having to do with the quality of the respondent's sexual functioning and relationships, how the respondent feels about his or her sexuality is likely to color how he or she rates the overall satisfaction with life.

Conditions and Procedures

Apart from the questions asked and the context in which those items are embedded, researchers may affect respondents' answers by the conditions under which they ask participants to respond.

Imagine for a moment answering questions about your first sexual experiences. Under what circumstances would you feel most comfortable and free to do so?

Chances are you imagined writing about such experiences, not expecting anyone else to see your answers. Indeed, as a general rule, people are more comfortable and more willing to admit personal, potentially embarrassing information about their sexuality when they are completing an anonymous questionnaire compared to when they believe others have access to their answers. So, all else being equal, we might expect people to be more likely to admit masturbation or extramarital sex when completing an anonymous questionnaire compared to answering the same questions posed in a one-to-one interview. Even within interviews, respondents are liable to be more comfortable with certain types of interviewers compared to other types.