

# SEX RESEARCH



## Chapter Highlights

### Issues in Sex Research

- Sampling
- Reliability of Self-Reports of Sexual Behaviour
- Web-Based Surveys
- Interviews versus Questionnaires
- Self-Reports versus Direct Observations
- Extraneous Factors
- Ethical Issues

### Some Statistical Concepts

- Average
- Variability
- Average versus Normal
- Incidence versus Frequency
- Correlation

### The Major Sex Surveys

- The Kinsey Report
- Sexual Behaviour in the United States
- Sexual Behaviour in France and Britain

Sexual Behaviour in Canada

- The Canada Youth, Sexual Health, and HIV/AIDS Study
- Magazine Surveys

### Studies of Special Populations

- Exotic Dancers
- Ontario First Nations AIDS and Healthy Lifestyle Survey

### Media Content Analysis

### Laboratory Studies Using Direct Observations of Sexual Behaviour

Masters and Johnson: The Physiology of Sexual Response

### Participant-Observation Studies

- Humphreys: The Tearoom Trade
- S/M Parties

### Experimental Sex Research

## WHAT IS RESEARCH, BUT A BLIND DATE WITH KNOWLEDGE.

—WILLIAM HENRY

This chapter is about sex research: how it is done, and how to evaluate it. It also describes some of the major sexuality studies. Why do we need sex research? What are its goals? Don't we already know everything we need to know about human sexuality? Isn't common sense sufficient?

The reality is there are still many things we do not know about human sexuality. People often have opinions and views about these issues and believe that their opinions are based on fact. Yet, too often they are based on misinformation, and sometimes even stereotypes or prejudice. Research is important because it creates accurate knowledge. Research puts beliefs, opinions, and theories to the systematic test.

There are a number of goals of sex research. First, it can be geared toward creating basic knowledge and understanding. For example, we might want to know what percentage of 15-year-olds have engaged in sexual activity, how often long-term couples have sex, or how effective the male condom is in preventing sexually transmitted infections. Second, research can be directed toward enhancing our understanding in order to influence sexual behaviour. For example, we might want to identify risk factors for individuals who might commit a sexual offence in order to prevent child sexual abuse; we might want to determine factors that affect sexual satisfaction in long-term relationships in order to help couples maintain satisfying sexual relationships; or, we might want to find out whether prepared childbirth techniques are effective in reducing anxiety and discomfort during labour and delivery. How can we provide effective prevention or intervention programs without this kind of knowledge on which to base these programs? Third, research can be geared toward public policy. For example, sexual health education is often a very controversial topic. An important question is whether individuals opposed to comprehensive sexual health education represent a majority of parents or a vocal minority of parents. Research can answer this question, thus allowing governments and school boards to take the wishes of the majority of parents into account when designing their sexual health education curriculum. Similarly, research can inform laws and regulations on a variety of issues, including access to emergency contraception, new reproductive technologies, pornography, and sex work.

Throughout this book, we describe the results of research that has attempted to answer these types of questions. In this chapter, we examine some questions related to sex research in general. How do sex researchers do it? How valid are their conclusions?

There are many different types of sex research, but basically the techniques vary in terms of the following: (1) whether they rely on people's self-reports of their sexual behaviour or whether the scientist observes the sexual behaviour directly; (2) whether large numbers of people are studied (surveys) or whether a small number or just a single individual is studied (in laboratory studies, qualitative research, or case studies); (3) whether the studies are conducted in the laboratory or in the field; and (4) whether sexual behaviour is studied simply as it occurs naturally or whether some attempt is made to manipulate it experimentally.

Examples of studies using all these techniques will be considered and evaluated later in this chapter. First, some issues in sex research will be discussed.

It is important to understand the techniques of sex research and their strengths as well as their limitations. This knowledge will help you evaluate the studies that are cited as evidence for various conclusions in later chapters and will also help you decide how willing you are to accept these conclusions. Perhaps more important, this knowledge will help you evaluate future sex research. Much sex research has been conducted already, but much more will be

**Population:** A group of people a researcher wants to study and make inferences about.

**Sample:** A part of a population.

**Probability sampling:** A method of sampling in research in which each member of the population has a known probability of being included in the sample.

**Random sampling:** An excellent method of sampling in research, in which each member of the population has an equal chance of being included in the sample.

**Stratified random sampling:** A method of sampling in which the population is divided into groups and then random sampling occurs in each group.

**Problem of refusal or non-response:** The problem that some people will refuse to participate in a sex survey, thus making it difficult to have a random sample.

**Volunteer bias:** A bias in the results of sex surveys that arises when some people refuse to participate, so that those who are in the sample are volunteers who may in some ways differ from those who refuse to participate.

done in the future. The information in this chapter should help you understand and evaluate sex research that appears 10 or 20 years from now. Moreover, the mass media often report poor-quality research as enthusiastically as high-quality research. You should be equipped to tell the difference.

## ISSUES IN SEX RESEARCH

### SAMPLING

One of the first steps in conducting sex research is to identify the appropriate **population** of people to be studied. Does the population in question consist of all adult human beings, all adults in Canada, all adolescents in Saskatchewan, all people guilty of sex crimes, or all married couples who engage in swinging? Generally, of course, the scientist is unable to get data for all the people in the population, and so a **sample** is taken.

At this point, things begin to get sticky. If the sample is a representative sample of the population in question and if it is a reasonably large sample, then results obtained from it can safely be generalized to the population that was originally identified. One way of obtaining a representative sample is by using **probability sampling**. The simplest form of probability sampling is **random sampling**. That is, if a researcher has really randomly selected 1 out of every 50 adolescents in Canada, then the results obtained from that sample are probably true of all adolescents in Canada. Another technique that is sometimes used to get such a sample is **stratified random sampling**.<sup>1</sup> But if the sample consists only of adolescents with certain characteristics—for example, only those whose parents agree to let them participate in sex research—then the results obtained from that sample may not be true of all adolescents. Sampling has been a serious problem in sex research.

Typically, sampling proceeds in three phases: the population is identified, a method for obtaining a sample is adopted, and the people in the sample are contacted and asked to participate. What is perhaps the thorniest problem occurs in the last phase: getting the people identified for the sample to participate. If any of the people refuse to participate, then the great probability sample is ruined. This is called the **problem of refusal (or non-response)**. As a result, the researcher is essentially studying volunteers; that is, people who agree to be in the research. The outcomes of the research may therefore contain distortions, called **volunteer bias**. In casually conducted research such as the Hite report (Hite, 1976, 1981), the response rate was only 3 percent, making it impossible to reach any conclusions about the population based on the sample. The problem of refusal in sex research is difficult, since there is no ethical way of forcing people to participate when they do not want to.

The problem of volunteer bias would not be so great if those who refused to participate were identical in their sexual behaviour to those who participated. But it is likely that those who refuse to participate differ in some ways from those who agree to, and that means the sample is biased. Evidence suggests that volunteers who participate in sex research hold

<sup>1</sup>A detailed discussion of stratified random sampling is beyond the scope of this book. For a good description of this method as applied to sex research, see Cochran et al. (1953). In brief, with a random sample, each individual in the population has an equal probability of being chosen. With a stratified random sample, the researchers can set a higher probability of inclusion for certain groups, a technique called oversampling. For example, if we had funds to interview 1000 people in Canada, a random sample would yield only about 30 Aboriginal individuals and 30 Chinese-Canadian individuals because each group constitutes about 3 percent of the Canadian population. We might not feel confident reaching conclusions about Aboriginal individuals or Chinese Canadians based on only 30 people, so we could decide to use stratified random sampling and give each of these groups a higher probability of inclusion compared with whites. If we tripled the probability of including these ethnocultural minority groups, the resulting sample of 1000 would include 90 Aboriginal individuals, 90 Chinese Canadians, 82 individuals from other visible ethnocultural minorities (e.g., South Asian, black) and 738 Canadians from non-visible-minority groups. Although these minority samples are still small, we would feel more confident about making conclusions about each group. We could do even more oversampling of Aboriginal individuals or of other ethnocultural groups that constitute even smaller percentages of the Canadian population to increase our confidence in our conclusions.

more permissive attitudes about sexuality and are more sexually experienced than those who don't; for example, they masturbate more frequently and have had more sexual partners (Bogaert, 1996; Morokoff, 1986; Strassberg & Lowe, 1995; Wiederman et al., 1994). In addition, women are less likely to volunteer for some but not all types of sex research than men are (Senn & Desmarais, 2001; Wiederman et al., 1994), so that female samples are even more highly selected than male samples. In sum, volunteer bias is potentially a serious problem when we try to reach conclusions based on sex research.

Table 3.1 shows how different the results of sex surveys can be, depending on how carefully the sampling is done (Greeley, 1994). The table shows results from two American surveys. The Janus report (Janus & Janus, 1993) used sampling methods so haphazard that the researchers ended up with what some call a "convenience sample." It included volunteers who came to sex therapists' offices and friends recruited by the original volunteers. In contrast, the General Social Survey conducted in 1993 by the University of Chicago obtained a probability sample. Notice that a considerably higher level of sexual activity is reported by the convenience sample in the Janus report, compared with the probability sample. This difference is especially pronounced among older adults. Convenience samples simply do not give us a very good picture of what is going on in the general population.

**Table 3.1** The Percentage of People Reporting Having Sex at Least Once a Week: Comparing a Convenience Sample with a Probability Sample

| Age     | Men                               |  | Women                             |  |
|---------|-----------------------------------|--|-----------------------------------|--|
|         | Convenience Sample (Janus Report) | Probability Sample (General Social Survey) | Convenience Sample (Janus Report) | Probability Sample (General Social Survey) |
| 18–26   | 72%                               | 57%  | 68%                               | 58%  |
| 27–38   | 83                                | 69   | 78                                | 61   |
| 39–50   | 83                                | 56   | 68                                | 49   |
| 51–64   | 81                                | 43   | 65                                | 25   |
| Over 65 | 69                                | 17   | 74                                | 6  |

Source: A. M. Greeley (1994), The Janus Report, *Contemporary Sociology*, 23, 221–223. Reprinted by permission of the American Sociological Association and Andrew M. Greeley.

## RELIABILITY OF SELF-REPORTS OF SEXUAL BEHAVIOUR

Most sex researchers have not directly observed the sexual behaviour of their research participants. Instead, most have relied on respondents' self-reports of their sexual practices. The question is: How accurately do people report their own sexual behaviour? Inaccuracies may occur in several ways.

### PURPOSEFUL DISTORTION

If you were an interviewer in a sex research project and a 90-year-old man said that he and his wife made love twice a day, would you believe him, or would you suspect that he might be exaggerating slightly? If a 35-year-old woman told you that she had never masturbated, would you believe her, or would you suspect that she had masturbated but was unwilling to admit it?

Respondents in sex research may, for one reason or another, engage in **purposeful distortion**, intentionally giving self-reports that are distortions of reality. These distortions may be in either of two directions. People may exaggerate their sexual activity (a tendency toward *enlargement*), or they may minimize their sexual activity or hide the fact that they have done certain things (*concealment*). Participants will often distort responses in the direction that they believe will be seen as more acceptable by the researcher, called **social desirability**. For example, an individual in a long-term relationship who believes that he or she engages in sexual activity

**Purposeful distortion:** Purposely giving false information in a survey.

**Social desirability:** The tendency to distort answers to a survey in the direction perceived to be more acceptable.



**Figure 3.1** The reliability of self-reports of sexual behaviour: If you were interviewing this man in a sex survey and he said that he had never masturbated, would you believe him, or would you think that he was concealing a taboo behaviour?

with his or her partner much less often and masturbates much more often than other people do may exaggerate his or her sexual frequency but minimize his or her masturbation frequency. Participants are often not aware that social desirability is affecting their answers.

Distortion is a basic problem when using self-reports. To minimize distortion, participants must be impressed with the fact that because the study will be used for scientific purposes, their reports must be as accurate as possible. They must also be assured that their responses will be completely anonymous. If they are not anonymous, people would be likely to hide behaviours that they do not want other people to know about or that embarrass them such as an extramarital affair or a history of sex with animals.

But even if all respondents were very truthful and tried to give as accurate information as possible, three factors might still cause their self-reports to be inaccurate: memory, difficulties with estimates, and interpreting the question in a different way than the researcher intended.

### MEMORY

Some of the questions asked in sex surveys require respondents to recall what their sexual behaviour was like many years before. For example, some of the data we have on sexual behaviour in childhood comes from the Kinsey study, in which adults were asked about their childhood sexual behaviour. This might involve asking a 50-year-old man to remember at what age he began masturbating and how frequently he masturbated when he was 16 years old. It might be difficult to remember such facts accurately. The alternative is to ask people about their current sexual behaviour, although getting data like these from children raises serious ethical and practical problems.

### DIFFICULTIES WITH ESTIMATES

One of the questions sex researchers have asked is: How long, on the average, do you spend in precoital foreplay? If you were asked this question, how accurate a response do you think

you could give? It is rather difficult to estimate time to begin with, and it is even more difficult to do so when engaged in an absorbing activity. For example, New Brunswick researchers found that, on average, men estimated the duration of foreplay as 13.4 minutes, which was significantly longer than the 11.3 minutes estimated by their female partners, suggesting that the men or the women or both were not accurate in the estimates of the duration of foreplay (Miller & Byers, 2004). The men and women both estimated the duration of intercourse at between seven and eight minutes, however. The point is that in some sex surveys people are asked to give estimates of things that they probably cannot estimate very accurately. This may be another source of inaccuracy in self-report data.

### INTERPRETING THE QUESTION

One of the questions that sex researchers often ask is: How many sexual partners have you had? This question assumes that participants all give the same meaning to the term sexual partner as the research intended. Yet, research in New Brunswick has shown that university students do not agree in their definitions of sexual terms including the terms *having sex*, *sexual partner*, and *abstinence* (Randall & Byers, 2003; Byers, Henderson, & Hobson, in press). For example, about two-thirds of students would include a person they engaged in oral sex with a sexual partner, but one third would not. Thus, estimates participants provide about the number of sexual partners will be affected not only by the accuracy of their memory, but also by how they define sexual partner.

### EVIDENCE ON THE RELIABILITY OF SELF-REPORTS

Scientists have developed several methods for assessing how reliable or accurate people's reports are (Catania et al., 1995). One is the method of **test-retest reliability**, in which the respondent is asked a series of questions and then is asked the same set of questions after a period of time has passed, for example, a week or a month. The correlation<sup>2</sup> between answers at the two times (test and retest) measures the reliability of responses. If people answer identically both times, the correlation would be 1.0, meaning perfect reliability. If there were absolutely no relationship between what they said the first time and what they said the second time, the correlation would be 0, meaning that the responses are not at all reliable.

In one study, urban African-American and Latina girls between the ages of 12 and 14 were interviewed about their sexual experiences and then were interviewed again three weeks later (Hearn et al., 2003). The test-retest reliability was .84 for the age at which they had their first crush and .95 for the age at which they first touched a penis, which indicates excellent reliability. Other research generally indicates that respondents give their best estimates about short, recent time intervals (Catania et al., 1990a).

Another method for assessing reliability involves obtaining independent reports from two different people who share sexual activity, such as husbands and wives. One study found that on a simple item such as whether a couple had engaged in intercourse in the last month, there was 93 percent agreement. Agreement on the number of times they had had intercourse in the last month, something that requires more difficult estimation, was .80, which is lower but still good (Hyde et al., 1996). Similarly, researchers in Quebec asked partners to indicate the behaviours that had occurred during lovemaking. The partners agreed 87 percent of the time on average, which is a high level of agreement (Ochs & Binik, 1999).

### WEB-BASED SURVEYS

The possibility of having surveys administered on websites has opened a whole new era in sex research. Compared with other methods for administering surveys, Web-based surveys have many advantages, but also some disadvantages (Bowen, 2005; Gosling et al., 2004; Kraut et al., 2004; Mustanski, 2001; Ochs et al., 2002).

**Test-retest reliability:**  
A method for testing whether self-reports are reliable or accurate; participants are interviewed (or given a questionnaire) and then interviewed a second time some time later to determine whether their answers are the same both times.

<sup>2</sup>The statistical concept of correlation is discussed later in this chapter.

Web-based sex surveys can recruit much larger samples than can traditional interview or questionnaire studies. For example, one Web survey of gays, lesbians, and bisexuals yielded 2800 completed surveys in just two months (Mustanski, 2001). In addition, Web surveys can potentially produce broader samples than traditional survey methods can. For example, if you were conducting a survey on students' sexuality using traditional methods, you would probably sample students at your own college or university. If, instead, you administered the questionnaire on the Web, you could sample students from colleges and universities across Canada and, indeed, around the world. These new methods open up exciting possibilities for cross-cultural research.

Web-based surveys have particular advantages for studying special populations defined by their sexual behaviour, particularly if the behaviour is taboo. For example, traditional studies of gays and lesbians have used methods such as recruiting the sample through gay activist organizations and gay bars. These methods have been criticized because they omit from the sample closeted gays and those who do not actively participate in organizations or go to bars. Closeted gays have equal access to Web-based surveys and can answer them in a highly anonymous way, respecting their own decision to remain closeted. Therefore, Web methods can access this population that had previously been studied very little and can yield a much wider sample of gays and lesbians. Web methods can also locate stigmatized sexual minorities, such as those involved in sadomasochism, bondage, and discipline, by recruiting participants through virtual communities and websites specialized for that particular sexual group.

Web-based surveys, then, have substantial strengths on the issue of sampling. Nonetheless, they still rely on self-reports, which as we saw earlier can be inaccurate to some degree.

Web-based surveys have the ability to eliminate extraneous influences on responding (discussed in the next section). For example, the gender or ethnicity of the interviewer may influence an individual's responses, but these factors are eliminated in a Web-administered questionnaire.

Do all these substantial advantages come with any disadvantages? Some bias is introduced because not everyone has Internet access. Access grows every day, but Internet users still, on average, have incomes above the national average. Internet samples are nonetheless considerably more diverse than the university-student samples used in much research. The researcher lacks control of the environment in which the respondent completes the survey—something that can be controlled in personal interviews but cannot in mailed-out questionnaires. One can imagine, for example, a group of students living in residence filling out a Web sex survey together and having fun faking the answers. Individuals might respond multiple times or might actually try to sabotage or skew the results to show a particular outcome. Internal checks can be built into the sequence of questions that can detect faked patterns of answers, and methods have been devised to detect repeat responders. Nonetheless, these issues continue to be a concern.

On balance, Web-based surveys offer substantial advantages over traditional survey methods. Researchers will have to continue to monitor and control potential problems such as repeat responders.

## INTERVIEWS VERSUS QUESTIONNAIRES

In the large-scale sex surveys, three methods of collecting data have been used: the face-to-face interview, the phone interview, and the written questionnaire. Each of these methods has some advantages when compared with the others (Catania et al., 1995).

The advantage of the interview method, particularly the face-to-face interview, is that the interviewer can establish rapport with the respondent and try to convince that person of the research's worth and of the necessity for being honest. An interviewer can also vary the sequence of questions depending on the person's response. For example, if a person mentioned having engaged in same-sex sexual activity, he or she would be asked a series of

questions about the experience; those questions would be omitted if the person reported having had no same-sex experiences. It is hard to get this kind of flexibility in a printed questionnaire. Finally, interviews can be administered to persons who cannot read or write. However, it is possible that respondents would be more honest in answering a questionnaire because they are more anonymous.

What do the data say about which method works best for sex research? Several researchers have compared the results obtained through use of two different methods. For example, in one study, the rate of reporting rape was nearly double (11 percent) in a face-to-face interview compared with a telephone interview (6 percent) (Koss et al., 1994, p. 174). This finding seems to indicate that interviewers can establish rapport and trust better in person than over the telephone. In a study assessing risky sexual behaviour among gay men, both face-to-face interviews and written questionnaires were administered to all respondents (Siegel et al., 1994). Riskier behaviours were more likely to be reported on the questionnaire than in the interview. People evidently feel a bit freer to report particularly sensitive information on the more private written questionnaire than to an interviewer. Many experts in sex research recommend that a face-to-face interview to build rapport be combined with a written questionnaire administered during the interview to tap particularly sensitive information (Laumann et al., 1994; Siegel et al., 1994).

A recent innovation is the **computer-assisted self-interview method (CASI)**, which can be combined with an audio component so that the respondent not only reads but also hears the questions. This method offers the privacy of the written questionnaire while accommodating poor readers. The computer can be programmed to follow varying sequences of questions depending on respondents' answers, just as a human interviewer does. In a survey among 15-year-old boys, 16 percent reported in a personal interview that they had engaged in vaginal intercourse, but 25 percent said they had done so when CASI was used (Mosher et al., 2005). Although these findings suggest that CASI produces more honest responses, it is also possible that the some boys exaggerated their sexual history on the computer.

**Computer-assisted self-interview method (CASI):** A method of data collection in which the respondent fills out questionnaires on a computer. Headphones and a soundtrack reading the questions can be added for young children or poor readers.

## SELF-REPORTS VERSUS DIRECT OBSERVATIONS

As we noted earlier, one of the major ways of classifying techniques of sex research is by whether the scientist relied on people's self-reports of their behaviour or observed the sexual behaviour directly.

The problems of self-reports have just been discussed. In a word, self-reports may be inaccurate. Direct observations—such as those done by Masters and Johnson in their work on the physiology of sexual response—have a major advantage over self-reports in that they are accurate. No purposeful distortion or inaccurate memory can intervene. On the other hand, direct observations have their own set of problems. They are expensive and time-consuming, with the result that generally only a rather small sample is studied. Furthermore, obtaining a representative sample of the population is even more difficult than in survey research. While some people are reticent about completing a questionnaire concerning their sexual behaviour, even more would be unwilling to come to a laboratory where their sexual behaviour would be observed by a scientist or where they would be hooked up to recording instruments while they engaged in sex. Thus, results obtained from the unusual group of volunteers who would be willing to do this might not be generalizable to the rest of the population. One study showed that volunteers for a laboratory study of male sexual arousal felt less guilty, were less sexually fearful, and were more sexually experienced than non-volunteers (Farkas et al., 1978; for similar results with females, see Wolchik et al., 1983).

Direct observations of sexual behaviour in the laboratory, such as those made by Masters and Johnson, involve one other problem: Is sexual behaviour in the laboratory the same as sexual behaviour in the privacy of one's own bedroom? For example, might sexual response in the laboratory be somewhat inhibited?

## EXTRANEOUS FACTORS

Various extraneous factors such as the gender, race, or age of the interviewer, may influence the outcome of sex research. Questionnaires do not get around these problems, since such simple factors as the wording of a question may influence the results. In one study, respondents were given either standard or supportive wording of some items (Catania et al., 1995). For the question about extramarital sex, the standard wording was as follows:

At any time while you were married during the past 10 years, did you have sex with someone other than your (husband/wife)?

The supportive wording was as follows:

Many people feel that being sexually faithful to a spouse is important, and some do not. However, even those who think being faithful is important have found themselves in situations where they ended up having sex with someone other than their (husband/wife). At any time while you were married during the past 10 years, did you have sex with someone other than your (husband/wife)?

The supportive wording significantly increased reports of extramarital sex from 12 percent with the standard wording to 16 percent with the supportive wording if the interviewer was of the same gender as the respondent; the wording made no difference when the interviewer and respondent were of different genders. Sex researchers must be careful to control these extraneous factors so that they influence the results as little as possible.

## ETHICAL ISSUES

There is always a possibility of ethical problems involved in doing research. Ethical problems are particularly difficult in sex research, because people are more likely to feel that their privacy has been invaded when you ask them about sex than when you ask them to name their favourite political candidate or memorize a list of words. All research conducted at Canadian universities must conform to a policy established by the federal government that sets standards for conducting ethical research involving human participants (Medical Research Council of Canada, 1998). The cardinal ethical principle is respect for human dignity: above all, researchers need to keep this in mind when they are establishing the goals and the procedures of their research. The principle of respect for human dignity leads to several other ethical principles, including respect for free and informed consent and protection from harm.

### FREE AND INFORMED CONSENT

According to the principle of **free and informed consent**, participants have a right to be told, before they participate, what the purpose of the research is and what they will be asked to do. They can choose not to participate or not to continue. An investigator may not coerce people to be in a study, and it is the scientist's responsibility to see to it that all participants understand exactly what they are agreeing to do. In the case of children who may be too young to give truly informed consent, consent is usually given by the parents.

The principle of informed consent was adopted by scientific organizations in the 1970s. It was violated in some of the earlier sex studies, as will be discussed later in this chapter.

### PROTECTION FROM HARM

Investigators should minimize the amount of physical and psychological stress to people in their research. Thus, for example, if an investigator must shock participants during a study, there should be a good reason for doing this. Questioning people about their sexual behaviour may be psychologically stressful to them and might conceivably harm them in some way, so sex researchers must be careful to minimize the stress involved in their procedure.

**Free and informed consent:** An ethical principle in research, in which people have a right to be informed, before participating, of what they will be asked to do in the research.

The principle of respect for privacy and confidentiality of response, for example, by making sure that responses are anonymous, is important to ensure that participants will not suffer afterward for their participation in research.

## JUSTICE

The principle of justice in research ethics holds that the risks of participating in research and benefits of the results of the research should be distributed fairly across groups in society. For example, early testing of the birth control pill was done on poor women in Puerto Rico, not on wealthy women in Vancouver. The risks were not distributed fairly, and a particular group bore a disproportionate burden. As a second example, research on the potential benefits of taking Aspirin for preventing heart attacks was conducted with an all-male sample. Whether this effect worked for women as well remained unknown. Thus, the benefits of the research did not extend fairly to everyone. Researchers have an obligation to make sure that they conduct their research in a way that benefits as wide a range of persons as possible.

## BALANCING HARMS AND BENEFITS

Considering the possible dangers involved in sex research, is it ethical to do such research? Officials in universities and government agencies sponsoring sex research must answer this question for every proposed sex research study. In doing so, they must do a **harms–benefits analysis**. That is, the stress to research participants should be minimized as much as possible, but some stresses will remain; they are the harms. The question then becomes: Will the benefits that result from the research be greater than the harm? That is, will the participants benefit in some way from being in the study, and will science and society in general benefit from the knowledge resulting from the study? Do these benefits outweigh the potential harms? If they do, the research is justifiable; otherwise, it is not.

As an example, Masters and Johnson considered these issues carefully and concluded that their research participants benefited from being in their research; they collected data from former participants that confirm this belief. Thus, a harms–benefits analysis would suggest that their research was ethical, even though their participants might have been temporarily stressed by it. Even in a study as ethically questionable as Laud Humphreys’s study of the tearoom trade (discussed later in this chapter), the potential harms to the participants should be weighed against the benefits that accrue to society from being informed about this aspect of sexual behaviour.

**Harms–benefits analysis:** An approach to analyzing the ethics of a research study, based on weighing the harms of the research (such as stress to subjects) against the benefits of the research (gaining knowledge about human sexuality).

# SOME STATISTICAL CONCEPTS

Before you can understand reports of sex research, you must understand some basic statistical concepts.

## AVERAGE

Suppose we get data from a sample of common-law couples on how many times per week they have sexual intercourse. How can we summarize the data? One way to do this is to compute some average value; this will tell us how often, on the average, these people have intercourse. In sex research, the number that is usually calculated is either the mean or the median, although the mode is sometimes used; all of these give us an indication of approximately where the average value for that group of people is. The **mean** is calculated by adding up all the scores and dividing by the number of people. The **median** is the score that splits the sample in half, with half the respondents scoring below that number and half scoring above it. The **mode** is the score with the greatest number of responses. People whose thoughts, feelings and behaviour are close to the average for their group might be said to be typical of that group.

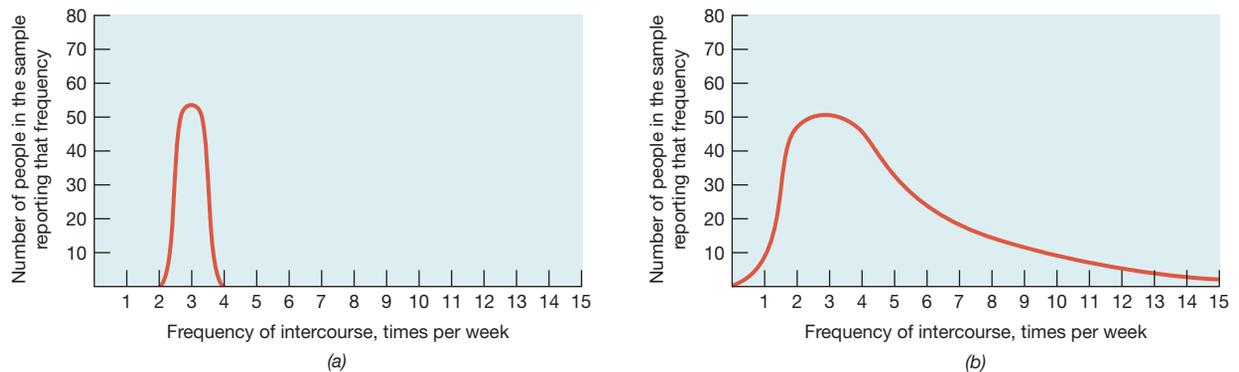
**Mean:** The average of respondents’ scores calculated by adding the scores and dividing by the number of people.

**Median:** The middle score.

**Mode:** The most frequent score.

## VARIABILITY

In addition to having an indication of the average for the sample of respondents, it is also interesting to know how much variability there is from one respondent to the next in the numbers reported. That is, it is one thing to say that the average common-law couple in a sample had intercourse three times per week, with a range in the sample from two to four times per week, and it is quite another thing to say that the average was three times per week, with a range from zero to 15 times per week. In both cases the mean is the same, but in the first there is little variability, and in the second there is a great deal of variability. These two alternatives are shown graphically in Figure 3.2. There is great variability in virtually all sexual behaviour.



**Figure 3.2** Two hypothetical graphs of the frequency of intercourse for common-law couples in a sample. In both, the average frequency is about three times per week, but in (a) there is little variability (almost everyone has a frequency between two and four times per week), whereas in (b) there is great variability (the frequency ranges from zero to 15 or more times per week). The graph for most sexual behaviour looks like (b), with great variability.

## AVERAGE VERSUS NORMAL

It is interesting and informative to report the average frequency of a particular sexual behaviour, but this also introduces the danger that people will confuse “average” with “normal.” That is, there is a tendency, when reading a statistic like “The average person has intercourse twice per week,” to think of one’s own sexual behaviour, compare it with that average, and then conclude that one is abnormal if one differs much from the average. If you read that statistic and your frequency of intercourse is only once a week, you may begin to worry that you are undersexed or that you are not getting as much as you should. If you are having intercourse seven times per week, you might begin worrying that you are oversexed. Such conclusions are a mistake, first because they can make you miserable and second because there is so much variability in sexual behaviour that any behaviour (or frequency or length of time) within a wide range is perfectly normal. Don’t confuse average with normal.

## INCIDENCE VERSUS FREQUENCY

In sex statistics, the terms “incidence” and “frequency” are often used. **Incidence** refers to the percentage of people who have engaged in a certain behaviour. **Frequency** refers to how often people do something. Thus, we might say that the incidence of masturbation among males is 92 percent (meaning that 92 percent of all males masturbate at least once in their lives), whereas the average frequency of masturbation among males between the ages of 16 and 20 is about once per week.

**Incidence:** The percentage of people giving a particular response.

**Frequency:** How often a person does something.

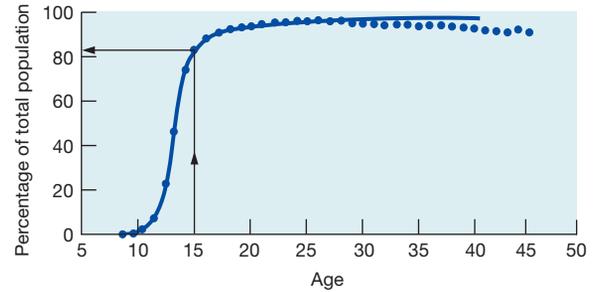
A closely related concept is that of cumulative incidence. If we consider a sexual behaviour according to the age at which each person in the sample first engaged in it, the *cumulative incidence* refers to the percentage of people who have engaged in that behaviour before a certain age. Thus, the cumulative incidence of masturbation in males might be 10 percent by age 11, 25 percent by age 12, 80 percent by age 15, and 95 percent by age 20. Graphs of cumulative incidence always begin in the lower left-hand corner and move toward the upper right-hand corner. An example of a cumulative-incidence curve is shown in Figure 3.3.

## CORRELATION

The term “correlation” is used by laypeople in contexts such as the following: “There seems to be a correlation here between how warm the days are and how fast the corn is growing.” But what do statisticians mean by the term “correlation”? A **correlation** is a number that measures the relationship between two variables. A correlation can be positive or negative. A positive correlation occurs when there is a positive relationship between the two variables; that is, people who have high scores on one variable tend to have high scores on the other variable, and low scores go with low scores. A negative correlation occurs when there is an opposite relationship between the two variables; that is, people with high scores on one variable tend to have low scores on the other variable. We might want to know, for example, whether there is a correlation between the number of years a couple has been together and the frequency with which they have sexual intercourse. In this case we might expect that there would be a negative correlation, and that is just what researchers have found. That is, the *greater* the number of years together, the *lower* the frequency of intercourse. As another example, we might want to know whether there is a correlation between people’s sexual attitudes and their sexual behaviour, specifically whether people who hold more permissive attitudes about premarital sex have more premarital partners. In this case we expect a positive correlation in the sense that the people who score high on the measure of permissive attitudes are expected to have more partners and that people who score low on the measure of permissiveness are expected to have fewer partners.

Correlations range between  $+1.0$  and  $-1.0$ . A correlation of  $+1.0$  indicates a perfect positive relationship between two variables, meaning that the person in the sample who scores highest on one variable also has the highest score on the other variable, the person with the second highest score on the first variable also has the second highest score on the other variable, and so on. A correlation of  $0$  indicates no relationship between the two variables. Knowing a person’s score on one variable tells us nothing about whether the person will have a high or low score on the other variable. Positive correlations between  $0$  and  $+1.0$ —for example,  $+0.62$ —say that the relationship is positive but not a perfect relationship.

As discussed earlier in this chapter, we use correlations to assess test–retest reliability. Suppose we administer a questionnaire to a sample of adults. One of the questions asks, “How many times did you masturbate to orgasm during the month of September?” We ask this question of the sample on October 1 and again on October 8. If each person in the sample gives us exactly the same answer on October 1 and on October 8, the correlation between the two variables (the number given on October 1 and the number given on October 8) would be  $+1.0$  and the test–retest reliability would be a perfect  $+1.0$ . Test–retest reliabilities for questions about sex typically range between  $+0.60$  and  $+0.90$ , indicating that people’s answers on the two occasions are not identical but are very similar.



**Figure 3.3** A cumulative-incidence curve for masturbation in males. From the graph, you can read off the percentage of males who report having masturbated by a given age. For example, about 82 percent have masturbated to orgasm by age 15.

**Correlation:** A number that measures the relationship between two variables.

## IN FOCUS 3.1

### What Is the Legacy of Alfred C. Kinsey?

Alfred C. Kinsey was born in 1894 in New Jersey, the first child of uneducated parents. In high school he did not date, and a classmate recalled that he was “the shyest guy around girls you could think of.”

His father was determined that Kinsey become a mechanical engineer. From 1912 to 1914 he tried studying mechanical engineering at Stevens Institute, but he showed little talent for it. At one point he was close to failing physics, but a compromise was reached with the professor, who agreed to pass him if he would not attempt any advanced work in the field! In 1914 Kinsey made his break and enrolled at Bowdoin College to pursue his real love: biology. Because this went against his father’s wishes, Kinsey was put on his own financially.

In 1916 he began graduate work at Harvard. There he developed an interest in insects, specializing in gall wasps. While still a graduate student, he wrote a definitive book on the edible plants of eastern North America.

In 1920 he went to Bloomington, Indiana, to take a job as assistant professor of zoology at Indiana University. That fall he met Clara McMillen, whom he married six months later. They soon had four children.

With his intense curiosity and driving ambition, Kinsey quickly gained academic success. He published a high school biology text in 1926, which received enthusiastic reviews. By 1936 he had published two major books on gall wasps; they established his reputation as a leading authority in the field and contributed not only to knowledge of gall wasps but also to genetic theory.

Kinsey came to the study of human sexual behaviour as a biologist. His shift to the study of sex began

in 1938, when Indiana University began a “marriage” course; Kinsey chaired the faculty committee teaching it. When confronted with teaching the course, he became aware of the appalling lack of information on human sexual behaviour. Thus, his research resulted in part from his realization of the need of people, especially young people, for sex information. In 1939 he made his first field trip to collect sex histories in Chicago. His lifetime goal was to collect 100 000 sex histories.

His work culminated in the publication of the Kinsey reports in 1948 (*Sexual Behavior in the Human Male*)



**Figure 3.4** (a) Alfred C. Kinsey (second from right, holding the folder), with colleagues Martin Gebhard, and Pomeroy.

## THE MAJOR SEX SURVEYS

In the major sex surveys, the data were collected from a large sample of people by means of questionnaires or interviews. The best known of these studies is the one done by Alfred Kinsey, so we will consider it first. His data were collected in the late 1930s and 1940s in the United States, and thus the results are now largely of historical interest. However, Kinsey documented his methods with extraordinary care, so his research is a good example to study for both the good and the bad points of surveys.

### THE KINSEY REPORT

#### THE SAMPLE

Kinsey (see In Focus 3.1) and his colleagues interviewed a total of 5300 men and 5940 women between 1938 and 1949 in the United States.

and 1953 (*Sexual Behavior in the Human Female*). While the scientific community generally received them as a landmark contribution, they also provoked hate mail.

In 1947 Kinsey founded the Institute for Sex Research (known popularly as the Kinsey Institute) at Indiana University. It was financed by a grant from the Rockefeller Foundation and, later, by book royalties. But in the 1950s United States Senator Joseph McCarthy, the communist baiter, was in power. He made a particularly vicious attack on the Institute and its research, claiming that its effect was to weaken American morality and thus make the nation more susceptible to a communist takeover. Under his pressure, the Rockefeller Foundation terminated its support.

Kinsey's health began to fail, partly as a result of the heavy workload he set for himself, and partly because he saw financial support for the research collapsing. He died in 1956 at the age of 62 of heart failure while honouring a lecture engagement when his doctor had ordered him to convalesce.

By 1957 McCarthy had been discredited and the grant funds returned. The Kinsey Institute was then headed by Paul Gebhard, an anthropologist who had been a member of the staff for many years. The Institute continues to do research today; it also houses a large library on sex and an archival collection including countless works of sexual art.

In a highly publicized, tell-all biography of Kinsey, James Jones (1997) argued that, although Kinsey's public self was a heterosexual married man, he was homosexual (more accurately, bisexual) and practised masochism. According to Jones, this discredits Kinsey's research.



**Figure 3.4** (b) Liam Neeson plays Kinsey in the 2004 movie *Kinsey*.

Jones's logic is poor, though, because one can evaluate the quality of the research methods independent of one's views about Kinsey's personal sex life. Moreover, Kinsey's sexual experimenting may have contributed to the innovativeness of his research.

Sources: Bancroft, 2004; Christensen, 1971; Gathorne-Hardy, 2000; Gebhard, 1976; Jones, 1997.

Initially, Kinsey was not much concerned with sampling issues. His goal was simply to collect sex histories from as wide a variety of people as possible. He later became more concerned with sampling issues and developed a technique called *100 percent sampling*. In this method he contacted a group, obtained its cooperation, and then got every one of its members to give a history. Once the cooperation of a group had been secured, peer pressure ensured that all members would participate. Unfortunately, although he was successful in getting a complete sample from such groups, the groups themselves were by no means chosen randomly. Thus, among the groups from which 100 percent samples were obtained were two sororities, nine fraternities, and 13 professional groups.

In the 1953 volume on females, Kinsey said that he and his colleagues had deliberately chosen not to use probability sampling methods because of the problems of non-response. This is a legitimate point. But as a result, we have almost no information on how adequate the sample was. One might say that the sampling was haphazard but not random. Generally, the following kinds

of people were overrepresented in the sample: university students, young people, well-educated people, Protestants, people living in cities, and people living in Indiana and the Northeast United States. Underrepresented groups included manual labourers, less well-educated people, older people, Roman Catholics, Jews, members of racial minorities, and people living in rural areas.

### THE INTERVIEWS

Although scientists generally regard Kinsey's sampling methods with some dismay, his face-to-face interviewing techniques are highly regarded. More than 50 percent of the interviews were done by Kinsey himself and the rest by his associates, whom he trained carefully. The interviewers made every attempt to establish rapport with the people they spoke to, and they treated all reports matter-of-factly. They were also skillful at phrasing questions in language that was easily understood. Questions were worded so as to encourage people to report anything they had done. For example, rather than asking "Have you ever masturbated?" the interviewers asked "At what age did you begin masturbating?" They also developed a number of methods for cross-checking a person's report so that false information would be detected. Wardell Pomeroy recounted an example:

Kinsey illustrated this point with the case of an older Negro male who at first was wary and evasive in his answers. From the fact that he listed a number of minor jobs when asked about his occupation and seemed reluctant to go into any of them [Kinsey] deduced that he might have been active in the underworld, so he began to follow up by asking the man whether he had ever been married. He denied it, at which Kinsey resorted to the vernacular and inquired if he had ever "lived common law." The man admitted he had, and that it had first happened when he was 14.

"How old was the woman?" [Kinsey] asked.

"Thirty-five," he admitted, smiling.

Kinsey showed no surprise. "She was a hustler, wasn't she?" he said flatly.

At this the subject's eyes opened wide. Then he smiled in a friendly way for the first time, and said, "Well, sir, since you appear to know something about these things, I'll tell you straight."

After that, [Kinsey] got an extraordinary record of this man's history as a pimp. . . . (Pomeroy, 1972, pp. 115–116)

Kinsey took strict precautions to ensure that responses were anonymous and that they remained anonymous. The data were stored on IBM cards, but using a code that had been memorized by only a few people directly involved in the project and which was never written down. The research team had even made contingency plans for destroying the data in the event that the police tried to demand access to the records for prosecuting people.

Put simply, the interviewing techniques were probably very successful in minimizing purposeful distortion. However, other problems of self-report remained: the problems of memory and of the inability to estimate some of the numbers requested.

### HOW ACCURATE WERE THE KINSEY STATISTICS?

When all is said and done, how accurate were the statistics presented by Kinsey? The American Statistical Association appointed a blue-ribbon panel to evaluate the Kinsey reports (Cochran et al., 1953; for other evaluations, see Terman, 1948; Wallin, 1949). While the panel members generally felt that the interview techniques had been excellent, they were dismayed by Kinsey's failure to use probability sampling and concluded, somewhat pessimistically:

In the absence of a probability-sample benchmark, the present results must be regarded as subject to systematic errors of unknown magnitude due to selective sampling (via volunteering and the like). (Cochran et al., 1953, p. 711)

However, they also felt that this was a nearly insoluble problem for sex research; even if a probability sample were used, refusals would still create serious problems.

The statisticians who evaluated Kinsey's methods felt that one aspect of his findings might have been particularly subject to error: the generally high levels of sexual activity, and particularly the high incidence of homosexual behaviour. These conclusions might, they felt, have been seriously influenced by sampling problems, particularly Kinsey's tendency to seek out persons with unusual sexual practices.

In sum, it is impossible to say how accurate the Kinsey statistics are; some may be very accurate and some may contain serious errors. Probably the single most doubtful figure is the high incidence of homosexuality.

## SEXUAL BEHAVIOUR IN THE UNITED STATES

U.S. researchers identified a need to conduct a large-scale, national survey of sexuality using probability sampling methods to determine what Americans' patterns of sexual behaviour are today. Such a study appeared in 1994. The research team was headed by Edward Laumann, a distinguished sociologist at the University of Chicago, and was conducted by the National Opinion Research Center, one of the best-respected survey organizations in the United States. The survey was called the National Health and Social Life Survey; to keep things simple, we will call this study the NHSLS (Laumann et al., 1994; Michael et al., 1994).

The research method involved a probability sampling of households in the United States. This excluded less than 3 percent of Americans but did exclude people living in institutions (e.g., prisons, university dormitories) and the homeless. People were eligible if they were adults between the ages of 18 and 59.

The researchers obtained an impressive 79 percent cooperation rate. Apparently, the great majority of people are willing to respond to a carefully conducted sex survey. The response rate is particularly impressive in view of the fact that today even surveys of more neutral topics such as political opinions generally have a response rate of only about 75 percent.

The data were obtained in face-to-face interviews supplemented by brief written questionnaires, which were handed to the respondents for particularly sensitive topics (such as masturbation) and sealed in a "privacy envelope" when they had been completed. The researchers chose the face-to-face interview because they felt that it would yield a higher response rate than a written questionnaire alone, and it allowed the researchers to ask more complex, detailed sequences of questions than would have been possible with just a written questionnaire or a telephone interview.

Laumann's team was careful to obtain the respondents' informed consent. About a week before an interviewer went to a household, a letter was sent explaining that the purpose of the survey was to help "doctors, teachers, and counselors better understand and prevent the spread of diseases like AIDS and better understand the nature and extent of harmful and of healthy sexual behavior in our country" (Laumann et al., 1994, p. 55). The purpose was therefore clearly and honestly described to participants before their consent was requested. In order to protect confidentiality, all identifying information about the respondent was destroyed after the interview. Each respondent was paid US\$35 for the interview, which lasted, on the average, 90 minutes.

The NHSLS is the best sex survey of the general population of the United States available today, and its findings will be referred to in many chapters in this book. The researchers made outstanding efforts to use the best sampling methods and interview techniques. Nonetheless, no doubt some respondents engaged in concealment and perhaps also in enlargement, because self-reports were used. The skill of the interviewers and their ability to build rapport is crucial in overcoming such problems. The researchers reported training the interviewers extensively, but nonetheless the extent of concealment, or *underreporting*, remains unknown.

Ironically, the most controversial statistic in the study was the same as in Kinsey's research—the incidence of homosexuality. In Kinsey's case, people thought the numbers were too high. In the case of the NHSLS, some people thought they were too low. We will return to this issue in Chapter 14.



**Figure 3.5** Research conducted among racial and ethnic minority groups must be culturally sensitive. Ideally, for example, interviewers should be of the same cultural background as research participants.

## SEXUAL BEHAVIOUR IN FRANCE AND BRITAIN

Again stimulated by a need for far better information about sexual behaviour in order to deal with the AIDS crisis, a team of French researchers, called the ACSF Investigators, conducted a major French sex survey (ACSF Investigators, 1992). The data were collected in 1991 and 1992. These researchers chose the method of telephone interviews, preceded by a letter notifying potential respondents that they had been identified for the representative sample. The response rate was 76.5 percent. The result was a sample of 20 055 adults ranging in age from 18 to 69.

The results indicate, for example, that 13 percent of French men, compared with 6 percent of French women, had multiple sex partners (two or more) in the past 12 months and therefore were at higher risk of HIV infection.

Anne Johnson and her colleagues conducted surveys in Britain in 1990–1991 and again in 1999–2001 (Johnson et al., 1992, 2001). The more recent survey used computer-assisted interviews. It yielded data for 11 161 men and women aged 16 to 44. The response rate was 63 percent. The researchers found that the average number of opposite-sex sexual partners in the previous five years was 3.8 for men and 2.4 for women; 2.6 percent of both men and women reported a same-sex partner; both rates were higher than were found in the 1990 survey. However, they also found increases in consistent condom use, particularly for men with multiple partners in the past year.

## SEXUAL BEHAVIOUR IN CANADA

Although Canadians have often used the large-scale American surveys to draw conclusions about the situation in Canada, Canadians differ from Americans in ways that are likely to affect sexual behaviour, such as family patterns, laws, attitudes, and health (Barrett et al., 1997). Thus, it is impossible to be certain of the extent to which these data reflect the sexual behaviour of Canadians. Unfortunately, there have been no large-scale Canadian sexuality surveys, with the exception of a few questions contained in the National Population Health Survey and other general surveys. This makes it difficult to develop a clear picture of the sexual behaviour of adult Canadians. In contrast, as just described, the United States, England, and France have all conducted this kind of large-scale survey in recent years. Many of the statistics in the French and British surveys match quite closely those from the United States. Thus, it is likely that a Canadian survey would also have similar, but not identical, findings. There are, however, many active sex researchers in Canada (see In Focus 3.2). These researchers have conducted surveys of selected groups, such as university students, teenagers, First Nations peoples, sex trade workers, people living with chronic illnesses, or gay and bisexual men, some of which are described in this chapter.

## THE CANADA YOUTH, SEXUAL HEALTH, AND HIV/AIDS STUDY

Researchers from four Canadian universities—Queen’s, Acadia, Laval, and the University of Alberta—conducted a study on youth sexuality and sexual health called the Canada Youth, Sexual Health, and HIV/AIDS Study, or CYSHHAS for short (Boyce et al., 2003). It examined a number of factors thought to influence adolescent sexual knowledge, attitudes, and behaviour.



## IN FOCUS 3.2

### Where Can I Go in Canada to Become a Sex Researcher?

There are many active sex researchers in Canada, and their numbers are growing. Most are in academic departments within specific disciplines such as psychology, sociology, family studies, or medicine. Most supervise students. The only Department of Sexology located in Canada operates in French at l'Université du Québec à Montréal. Although it is impossible to name all Canadian sex researchers, here are some of the most active researchers (from east to west).

Psychologist Lisa Price studies sexual coercion and risky sexual behaviour among adolescents at Acadia University. At the University of New Brunswick, psychologist Sandra Byers is particularly well known for her research on sexual interactions in close relationships, including sexual satisfaction, sexual dysfunction, and sexual coercion, and Lucia O'Sullivan is an expert in adolescent sexual health.

In Quebec, psychologist Francine Lavoie of Laval University studies high school students' sexually coercive experiences. Joseph Levy and Joanne Otis at the Département de sexologie, l'Université du Québec à Montréal, have been active in assessing the sexual behaviour of Quebecers. In the same department, Martine Hébert investigates child sexual abuse, and psychologist Sophie Bergeron studies women's sexual pain disorders. At McGill University, psychologists Yitzchak Binik studies sexual pain in women, and Bärbel Knäuper investigates how individuals make sexual health-related judgments. At Concordia University, sociologist Frances Shaver is a leading researcher on sex work, and James Pfaus studies the neurochemical and molecular events underlying sexual behaviour.

A number of Ontario universities have active sex research programs. Researchers at the Social Program Evaluation Group at Queen's University in Kingston have published extensively on adolescent sexual behaviour. Also at Queen's, psychologists William Marshall and Vernon Quinsey have an international reputation for their work on the assessment and treatment of sex offenders, and Caroline Pukall does research related to sexual pain and its effects on sexual and marital functioning. At the University of Ottawa, psychiatrist Paul Federoff studies the treatment of sex offenders; psychologist Elke Reissing investigates sexual pain disorders as well as sexual adjustment following treatment for cancer. At the Centre for Addiction and Mental Health, Clarke Division, in Toronto, psychologists Ken Zucker and Ray Blanchard are well known for their work on gender identity disorders

in children and adults, Harold Barbaree and Michael Seto do research related to sexual offenders, and Meredith Chivers studies sexual psychophysiology. Ted Myers at the University of Toronto does research related to HIV.

Psychologist Anthony Bogaert at Brock University is well known for his work on the origins of sexual orientation. Psychologist Terry Humphreys at Trent University does research related to human sexuality and social psychology. At the University of Waterloo, psychologist B. J. Rye studies HIV/AIDS and attitudes toward sexual minorities, and Christine Purdon examines the role of anxiety in sexual functioning. At the University of Guelph, Robin Milhausen does research related to sexual arousal and sexual health. William Fisher of the Department of Psychology at the University of Western Ontario has an international reputation for his work on the prevention of teen pregnancy, STIs, and HIV infection. At the University of Windsor, sociologist Eleanor Maticka-Tyndale is well known for her qualitative and multimethod research on risk behaviour related to pregnancy and STI/HIV infection, and sociologist Barry Adam does research on HIV and same-sex relationships.

Psychologist Melanie Morrison at the University of Saskatchewan studies prejudice and discrimination toward sexual minorities. At the University of Alberta, Maryanne Doherty studies sexual health education and risky sexual health behaviours. Martin Lalumière at the University of Lethbridge does research on sexual aggression, and Paul Vasey studies sexuality and gender from a biocognitive perspective.

At the University of British Columbia, physician Rosemary Basson conducts research on sexual dysfunction, physician Stacy Elliott does research on sexuality and disability, psychologist Lori Brotto studies women's sexual health, psychologist Judith Daniluk is well known for her research on infertility, and psychologist Boris Gorzalka conducts psychophysiological sex research. Sociologist Aaron Devor at the University of Victoria has made important contributions in his work on conceptualization of gender dysphoria.

Canadian sex researchers publish their findings in both national and international journals. There is one Canadian journal committed to the dissemination of sex research: the quarterly *Canadian Journal of Human Sexuality*. Many belong to the Canadian Sex Research Forum ([www.csr.ca](http://www.csr.ca)), the only national association for sex researchers, as well as to international sexological organizations.

Many of these questions were also used in the Canada Youth and AIDS Study conducted in 1987 by Alan King and his colleagues (King et al., 1988), allowing comparisons between the two studies. Because the CYSHHAS focused on sexual health, it is not a comprehensive survey of adolescent sexual behaviour and attitudes.

The researchers collected data in all 10 provinces as well as in the Yukon and Northwest Territories. They surveyed 11 074 youth in grades 7, 9, and 11. However, in order to be acceptable to school administrations, the grade 7 version included only one question about sexual experiences. The study was conducted in both French and English. The researchers used excellent sampling methods. They designed their sampling procedure so that the data would be representative of Canada as a whole and they also would have enough participants that they could present the findings separately for each province. However, some selected schools refused to participate. This resulted in a sample that was not equally representative of the whole country and was too small to analyze by province or territory. There also were some problems related to potential volunteer bias. For example, 18 percent of students either failed to return their signed permission slip or had parents who refused to give them permission to participate, and 5 percent of the students refused to participate. The students who did participate may differ in some important ways from those who did not.

The researchers found that many youth had begun engaging in sexual intercourse by age 14. For example, 23 percent of boys and 19 percent of girls in grade 9 and 40 percent of boys and 46 percent of girls in grade 11 reported having engaged in sexual intercourse at least once. These percentages are similar to, and if anything somewhat lower than, those obtained in the Canada Youth and AIDS Study in 1987, indicating that the percentage of students engaging in sexual intercourse does not appear to be increasing. However, the students who are engaging in sexual intercourse reported doing so more frequently than did students in 1987. Although 78 percent of the boys and 68 percent of the girls said that they had used a condom at last intercourse, between 5 and 10 percent had not used any form of birth control. Further, students who participated in 2002 were less accurate in their sexual knowledge than were the students who participated in 1987. Although this study assessed both anglophone and francophone youth, the researchers did not assess ethnicity. Thus, we do not know how cultural background affects the sexual attitudes and behaviours of Canadian youth.

## MAGAZINE SURVEYS

Many large-scale sex surveys have been conducted through magazines. Often the survey is printed in one issue of the magazine and readers are asked to respond. The result can be a huge sample—perhaps 20 000 people—which sounds impressive. But are these magazine surveys really all they claim to be?

Sampling is just plain out of control with magazine surveys. The survey is distributed just to readers of the magazine, and different magazines have different clienteles. No one magazine reaches a representative sample of Canadians. If the survey appeared in *Chatelaine*, it would go to certain kinds of women; if it were in *Canadian Living*, it would go to others. It would be risky to assume that women who read *Chatelaine* have the same sexual patterns as those who read *Canadian Living*. To make matters worse, the response rate is unknown. We can't know how many people saw the survey and did not fill it out, compared with the number who did. The response rate could be something like 3 percent. One does not, therefore, even have a random sample of readers of that magazine.

As an example, let's consider a survey that was reported in the August 2000 issue of *Cosmopolitan* (Gilbert, 2000). The headline on the cover announces "Our Biggest Sex Survey Ever, Thousands of Guys Reveal What Sends Them Over the Edge (Their Answers Will Shock You)." The description of the method in the articles says that *Cosmo* polled 60 000 "loose-lipped men and women." That's a much larger sample than the NHLS—*but*, in sex surveys

as in some other aspects of sexuality, bigger is not always better. How did *Cosmo* distribute the surveys? If they were printed in a previous issue, which seems like a good guess, how can we know the response rate? And how did so many men receive the survey, given that *Cosmo* is a magazine carefully aimed at a female audience? Among the respondents, how many were married? Single? What about their ethnic backgrounds? How old were they? Of course, these details are probably not the sort of thing that *Cosmo* thinks will entertain its readers. Nonetheless, the editors could have printed the information in a small box at the end of the article. More importantly, these details are crucial in understanding whether one can take the survey's claims seriously.

One question asked what a guy thinks of a girl who has sex on a first date. Of the men who were polled, 44 percent said they were happy when a woman went with her desires and wouldn't think negatively about her, as long as she was comfortable with her decision. From this, can we conclude that 44 percent of American men don't think ill of a woman who goes to bed with them on a first date? This conclusion would require a leap of logic that is too big for safety. *Cosmo* wasn't even close to having a random sample in this survey.

For all these reasons, it would not be legitimate to infer that these statistics characterize North American women in general. We could continue with more examples of magazine surveys, but the general conclusion should be clear by now. Although they may appear impressive because of their large number of respondents, magazine sex surveys actually are poor in quality because the sample generally is seriously biased.

## STUDIES OF SPECIAL POPULATIONS

In addition to the large-scale surveys of Americans and of Canadian youth discussed earlier, many studies of special populations have been done. Two examples are given here: the Maticka-Tyndale study of exotic dancers and a survey of First Nations peoples in Ontario.

### EXOTIC DANCERS

Eleanor Maticka-Tyndale and her colleagues conducted a study of exotic dancers working at strip clubs in Southern Ontario (Lewis & Maticka-Tyndale, 1998; Maticka-Tyndale et al., 1999). Their goal was to determine whether the dancers' activities, both inside and outside the club, put them at risk for STIs, including HIV infection. They interviewed 30 female exotic dancers who had been dancing from one to 22 years. The researchers used a qualitative methodology rather than the quantitative methodology used in the other research described in this chapter. In **qualitative research**, the researchers try to make sense of experiences in terms of the meanings that people give to them (Denzin & Lincoln, 1994). Thus, qualitative researchers emphasize the participant's point of view and represent this point of view by providing quotations from participants rather than by giving statistics.

It is difficult to recruit a representative sample of sex workers because of the stigma attached to the work and because sex workers are often distrustful of researchers (Benoit et al., 2005). Therefore, the researchers used a procedure called *non-probability purposive sampling* to maximize the diversity in the small sample. They wanted to make sure that the conclusions drawn from the research would reflect all the situations in which dancers find themselves. Participants were identified by key informants, by research assistants who had worked as dancers themselves, and by dancers who participated in the study, a technique called *snowballing*. Thus, as with all qualitative research, this was not a random or representative sample and thus we cannot draw conclusions about frequencies and prevalences. Nonetheless, it provides an in-depth understanding of the world of exotic dancers.

Participants responded to an informal set of open-ended questions that allowed them to freely express themselves. The interviews were analyzed to identify themes that emerged

**Qualitative research:** Research, usually involving interviews, in which the researchers try to make sense of the meanings that people give to their experiences.



## IN FOCUS 3.3

### Confessions of a Scientist: The Career of Dr. William Fisher

*Dr. William Fisher is a professor in the Department of Psychology and the Department of Obstetrics and Gynaecology at the University of Western Ontario. He received his Ph.D. in Social Psychology from Purdue University in 1978. He is world-renowned for the Information–Motivation–Behavioural Skills model, his conceptualization of the factors that drive sexual and reproductive health behaviour, and for his work on HIV/AIDS prevention and on the effects of pornography on men’s and women’s behaviour. Dr. Fisher’s work is described throughout this book (see Chapters 7, 10, and 17). He has received a National Health Scientist Award from Health Canada, the Hellmuth Award for Achievement in Science from the University of Western Ontario, and he is a Fellow of the Society for the Scientific Study of Sexuality. Below he reflects, with humour, on how he came to be a sexuality researcher.*

Coming out of the chaos, commitment, and politics of the Vietnam- and Civil Rights-era in the 1960s, I resolved, naïvely, to try to understand and improve the human condition, a delusional state from which I have yet to recover. Accordingly, I applied for admission to a graduate school that featured stellar researchers in the areas of human attraction and human aggression—which seemed to me at the time to be the issues we need to understand if we are to have any chance to survive as a species. Astoundingly, Donn Byrne, one of

the world’s premier scientists in the area of love and attraction, accepted me for graduate study. He had just shifted his research focus from interpersonal attraction to sexual behaviour—a natural progression, in retrospect, and we were off to the races.

As a graduate student I conducted research on the effects of pornography (what else?), and two things caught my eye immediately. First, I found that men and women who viewed pornography and who were most revolted by it showed large increases in their sexual activity levels in the days following exposure. (As an aside, the study was published in both the *Journal of Personality and Social Psychology* and in *Screw* magazine. Fortunately, the publication in *Screw* magazine did not turn out to be a career ender—no prospective employer ever admitted to having seen it). Second, I found that men and women who responded to pornography with the most pronounced negative emotions also, and puzzlingly, had the most children. At first it was difficult to understand why—and indeed how—this happened. Then we realized that erotophobic persons—that is, people who are emotionally negative to sex—have a really tough time doing just about everything you need to do to not have children. That is, they find it hard to learn about contraception, talk with a partner about it, acquire it from a physician or a pharmacy, and use it consistently.

That was my start, and since graduate school, building

from the sex workers’ responses. There were two different types of dancers. Women begin dancing primarily for the money, with the view that it will be temporary. Goal-oriented dancers continue to treat dancing as a temporary job and usually do not use alcohol or drugs or engage in sexual activity as part of the job. College and university students are one group of goal-oriented dancers. Dancing is attractive to them because it pays well and can fit into their class schedule. Some women shift from viewing dancing as a temporary job to viewing it as a career. These career dancers are usually part of the strip club culture, are often heavy drinkers, and may be involved in drug use. They may have sex with customers as part of the dancing or on dates with the men they meet while dancing at the clubs.

The researchers faced a number of difficulties that are common in this type of research. First, it was difficult to recruit participants. Dancers do not have much interest in participating in research and are suspicious of researchers. Second, as there is a stigma associated with exotic dancing, the researchers had to take extra steps to ensure that participants could not be identified. However, by using a qualitative methodology, they provided insights into the experiences of women who work as exotic dancers from their own points of view that can be difficult to get from quantitative methods such as questionnaires.

on this observation, I have worked toward development of a theory of the basic psychological factors that drive human sexual behaviour. My research has been aimed at improving people's sexual and reproductive health by applying this theory in areas as diverse as adolescent pregnancy prevention, HIV prevention, and reproductive health care seeking. I have been fortunate to do this work in settings as varied and challenging as inner-city high schools in the United States, South African AIDS treatment centres, and Israeli–Palestinian HIV containment programs. I've been at this work for years. I've published 150 papers in this area, and I feel like I've barely begun.

### Why I Do What I Do

I do what I do because I believe that the development and application of psychological theory in the area of sexual and reproductive health is important for the human condition. I do what I do because I enjoy creating conceptual models that can with power and precision be used to predict and promote human sexual and reproductive health outcomes. I do what I do because my work has had the unintended but often enjoyable effect of inflaming both the political right (see my work on contraceptive behaviour and how to promote it) and the political left (see my work on pornography and failure to find that it has negative effects), so I know I must be doing something right.



**Figure 3.6** Dr. William Fisher is a well-known psychologist and sex researcher.

### Proudest Achievements

Catching the occasional fish. Not really. My proudest achievements involve my resolute insistence on following my data, regardless of their political correctness or incorrectness, and insisting on maintaining fundamental human values and principles, regardless of my data.

## ONTARIO FIRST NATIONS AIDS AND HEALTHY LIFESTYLE SURVEY

The Ontario First Nations AIDS and Healthy Lifestyle Survey was conducted by Ted Myers and his colleagues (1993) at the Division of Community Health at the University of Toronto in collaboration with the First Nations Steering Committee. The goal of the study was to assess knowledge, attitudes, and behaviours related to HIV infection among First Nations peoples in Ontario. All decisions were made by consensus between the academic researchers and the Steering Committee in order to take the unique concerns of communities into account. The researchers used random selection to obtain a representative sample. They selected equal numbers of men and women as well as equal numbers within each of four age groups (Myers et al., 1993).

The data were collected using face-to-face interviews as well as an answer booklet for highly personal questions. All interviewers were hired from participating communities, spoke the appropriate First Nations language, and participated in two days of training. For questions about sexual behaviour, respondents were given a choice of using technical terms or slang terms. Most communities took steps to promote the study. The researchers found that

many participants had engaged in high-risk sexual behaviours. For example, 40 percent of the men and 18 percent of the women reported two or more sexual partners in the past year. Sixty percent of respondents did not consistently use a condom when engaging in vaginal or anal intercourse.

The methodology used in this study demonstrates a number of issues that need to be kept in mind in doing research with different cultural groups (Ford & Norris, 1991). First, respondents should be interviewed by an interviewer of the same gender and ethnic background as themselves. This practice is important for building rapport and establishing trust during the interview, both of which are critical in obtaining honest answers. Language is another important issue in constructing interviews. Many people, including those from the majority Canadian culture, do not know scientific terms for sexual concepts. Interviewers therefore have to be ready with a supply of slang terms so that they can switch to these if a respondent does not understand a question. This problem becomes more complex when interviewing people whose first language is not English. In keeping with these recommendations, Myers and his colleagues used interviewers from the communities involved in the study, allowed interviewers to translate the question into the appropriate First Nations language as they conducted the interview, if required, and trained them in both technical and slang terms.

This research also demonstrates another important principle—representatives of the target communities participated in the design and management of the study. This has two advantages. First, it allows the communities to have input into the research design and methodology to ensure that the research takes the unique concerns of each community into account. Second, minority-group members are more likely to agree to participate in research if they know that representatives of their communities were involved in designing the study.

In conclusion, doing sex research with people from diverse ethnocultural communities in Canada requires more than just administering the same old surveys to samples of people from these groups. It requires revisions to methodology that are culturally sensitive to issues such as the ethnicity of the interviewer, the language used in the interview, and the special sensitivity of some groups regarding some topics.

## MEDIA CONTENT ANALYSIS

To this point we have focused on methods used to analyze people's responses. Yet we also have recognized the profound impact of the mass media on Canadians' sexuality. To be able to understand this impact, we need to be able to analyze the media. As an example, let's suppose that your friend Rachel says that it is deeply disturbing that women are shown in nothing but traditional roles on prime-time TV, and this situation hasn't improved a bit over the years. Your other friend Monique disagrees, saying that there may still be some traditional images of women, but there are many examples of women in non-traditional roles such as doctors, and the media's portrayals of women have changed a lot over the years. How can you decide who is right? Arguing won't settle the debate. However, you could use a technique called **content analysis** to analyze how the media portray women today and how they have portrayed women in the past (Reinharz, 1992; Weber, 1990).

Content analysis refers to a set of procedures used to make valid inferences about text. The "text" might be romance novels, advice columns in *Chatelaine* magazine, lyrics from rap music, movies, or prime-time television programs. As it turns out, many of the same methodological issues discussed earlier also come into play with content analysis. Here, we have used a recently published study on depictions of sex and rape in popular films to exemplify these issues (Bufkin & Eschholz, 2000).

Sampling is one such issue. The first thing the researchers conducting this study needed to do was define the population. Were they interested in all films or particular types of films? Next, they needed to define the time period of interest: films released in the current year, the past five years, the past ten years, and so on. Finally, they needed to decide whether

**Content analysis:** A set of procedures used to make valid inferences about text.

to analyze all films that met these criteria or a subsample of these films, and whether to analyze the entire film or selected parts of the film. The researchers decided to include the 50 top-grossing films in the United States in 1996 in their sample.

The next step is to create a coding scheme. First, the researchers needed to define the recording unit—was it the film, the scene, particular behaviours, or specific statements? The authors chose to use two units of analysis: the movie and the sex scene. Next, perhaps more importantly, they needed to define coding categories. Creating the coding scheme involves defining the basic content categories, the presence or absence of which will be recorded; the coding categories used depend on the research

questions. In this instance, the researchers categorized sex scenes as heterosexual or homosexual and consensual or rape. They had to define what observable behaviours count as “sex”; they used a broad definition of sex including not only depictions of sexual activities but also sexual intercourse that was implied; for example, when characters were shown in bed after sexual intercourse. There were other categories used for categorizing rape scenes, including the type of rape and whether the offender was punished for the crime.

Researchers doing content analysis must demonstrate that their data are reliable and not biased. Usually, a measure called **intercoder** or **interrater reliability** is used. Two or more trained individuals independently code all or some of the text in the sample. This is done to ensure that the coding is accurate and the coder is not either overreporting (e.g., recording scenes as rape when they did not actually include rape) or underreporting (e.g., failing to record scenes that include forced intercourse as rape scenes). To give a measure of the interrater reliability, the researcher computes a correlation or percentage agreement between the two coders' results. In this study, the interrater reliability for the occurrence of rape was a correlation of 0.98. This is very high, since if the coders agreed exactly the correlation would be 1.0.

Content analysis is a powerful scientific technique that allows us to know how the media portray sexuality. For example, in this study researchers found that—contrary to common perceptions that most movies contain sex—60 percent of the movies in this sample did not show a single sex scene. They found a total of 30 sex scenes, of which five were rapes.

A related topic to content analysis is *critical discourse analysis*, which analyzes written texts for their underlying meaning. One such study examined how HIV/AIDS was portrayed in the 20 highest-circulating Canadian magazines in 1991, 1996, and 2001 (Clarke, 2006). The results showed that these stories were still characterized by heterosexism and homonegativity, although more subtly than in the past.



**Figure 3.7** Precise methods have been developed for analyzing the content of the media.

**Intercoder or interrater reliability:** In content analysis, the correlation or percentage of agreement between two coders independently rating the same texts.

## LABORATORY STUDIES USING DIRECT OBSERVATIONS OF SEXUAL BEHAVIOUR

The numerous problems associated with using self-reports of sexual behaviour in scientific research have been discussed. The major alternative to using self-reports is to make direct observations of sexual behaviour in the laboratory. These direct observations overcome the major problems of self-reports: purposeful distortion, inaccurate memory, and inability of people to estimate correctly or describe certain aspects of their behaviour. The pioneering example of this approach is Masters and Johnson's work on the physiology of sexual response.

## MASTERS AND JOHNSON: THE PHYSIOLOGY OF SEXUAL RESPONSE

William Masters began his research on the physiology of sexual response in 1954. No one had ever studied human sexual behaviour in the laboratory before, so he had to develop all the necessary research techniques from scratch. He began by interviewing 188 female prostitutes, as well as 27 male prostitutes working for a homosexual clientele. They gave him important preliminary data in which they “described many methods for elevating and controlling sexual tensions and demonstrated innumerable variations in stimulative techniques,” some of which were useful in the later program of therapy for sexual disorders.

Meanwhile, Masters began setting up his laboratory and equipping it with the necessary instruments: an electrocardiograph to measure changes in heart rate over the sexual cycle, an electromyograph to measure muscular contractions in the body during sexual response, and a pH meter to measure the acidity of the vagina during the various stages of sexual response.

### SAMPLING

Masters made a major breakthrough when he decided that it should be possible to recruit normal participants from the general population and have them engage in sexual behaviour in the laboratory, where their behaviour and physiological responses could be carefully observed and measured. This approach had never been used before, as even the daring Kinsey had settled for people’s verbal reports of their behaviour.

Masters let it be known in the medical school and university community that he needed volunteers for laboratory studies of human sexual response. Some people volunteered because of their belief in the importance of the research. Some, of course, came out of curiosity or because they were exhibitionists; they were weeded out in the initial interviews. Participants were paid for their hours in the laboratory, as is typical in medical research, so many medical students and graduate students participated because it was a way to earn money.

Initially, all prospective participants were given detailed interviews by Masters and his colleague Virginia Johnson. People who had histories of emotional problems or who seemed uncomfortable with the topic of sex either failed to come back after this interview or were eliminated even if they were willing to proceed. Participants were also assured that the anonymity and confidentiality of their participation would be protected carefully. In all, 382 women and 312 men participated in the laboratory studies reported in *Human Sexual Response* (Masters & Johnson, 1966). The men ranged in age from 21 to 89, while the women ranged from 18 to 78. A total of 276 married couples participated, as well as 106 women and 36 men who were unmarried. The unmarried persons were helpful mainly in the studies that did not require sexual intercourse, as, for example, studies of the ejaculatory mechanism in males and of the effects of sexual arousal on the positioning of the diaphragm in the vagina.

Certainly, the group of people Masters and Johnson studied were not a random sample of the population of the United States. In fact, one might imagine that people who would agree to participate in such research would be rather unusual. The data indicate that they were more educated than the general population, and the sample was mostly white, with only a few ethnic minority persons participating. Paying the participants probably helped broaden the sample since it attracted some people who simply needed the money. The sample omitted two notable types of people: those who were not sexually experienced or did not respond to sexual stimulation and those who were unwilling to have their sexual behaviour studied in the laboratory. Therefore, the results Masters and Johnson obtained might not generalize to such people.

Just exactly how critical is this sampling problem to the validity of the research? Masters and Johnson were not particularly concerned about it because they assumed that the processes they were studying are normative; that is, they work in essentially the same way in all people. This assumption is commonly made in medical research. For example, a researcher

who is studying the digestive process does not worry that the sample is composed of all medical students, since the assumption is that digestion works the same way in all human beings. If this assumption is also true for the physiology of sexual response, then all people respond similarly, and it does not matter that the sample is not random. Whether this assumption is correct remains to be seen (see Chapter 9 for further critiques). The sampling problem, however, does mean that Masters and Johnson could not make statistical conclusions on the basis of their research; for example, they could not say that  $X$  percent of all women have multiple orgasms. Any percentages would be specific to their sample and could not be generalized to the rest of the population.

In defence of their sampling techniques, even if they had identified an initial probability sample they would still almost surely have had a very high refusal rate, probably higher than in survey research, and the probability sample would have been ruined. At present, this seems to be an unsolvable problem in this type of research.

### DATA COLLECTION TECHNIQUES

After they were accepted for the project, participants proceeded to the laboratory phase of the study. First, they had a “practice session,” in which they engaged in sexual activity in the laboratory in complete privacy, with no data being recorded and no researchers present. The purpose of this was to allow the participants to become comfortable with engaging in sexual behaviour in a laboratory setting.

The physical responses of the participants were then recorded during sexual intercourse, masturbation, and “artificial coition.” Masters and Johnson made an important technical advance with the development of the artificial coition technique. In it, a female participant stimulates herself with an artificial penis constructed of clear plastic; it is powered by an electric motor, and the woman can adjust the depth and frequency of the thrust. There is a light and a recording apparatus inside the artificial penis, so the changes occurring inside the vagina can be photographed.

Measures such as these avoid the problems of distortion that are possible with self-reports. They also answer much different questions. That is, it would be impossible from such measures to tell whether the person had engaged in same-sex sexual activity or how frequently he or she masturbated. Instead, they ascertain how the body responds to sexual stimulation, with a kind of accuracy and detail that would be impossible to obtain through self-reports.

One final potential problem also deserves mention. It has to do with the problems of laboratory studies: That is, do people respond the same sexually in the laboratory as they do in the privacy of their own homes?

### ETHICAL CONSIDERATIONS

Masters and Johnson were attentive to ethical principles. They were careful to use informed consent. Potential participants were given detailed explanations of the kinds of things they would be required to do in the research and were given ample opportunity at all stages to withdraw from the research if they so desired. Furthermore, Masters and Johnson eliminated people who appeared too anxious or distressed during the preliminary interviews.

It is also possible that participating in the research itself might have been harmful in some way to some people. Masters and Johnson were particularly concerned with the long-term effects of participating in the research. Accordingly, they made follow-up contacts with the participants at five-year intervals. In no case did a participant report developing a sexual disorder. In fact, many of the couples reported specific ways in which participating in the research enriched their marriages. Thus, the available data seem to indicate that such research does not harm the participants and may in some ways benefit them, not to mention the benefit to society that results from gaining information in such an important area.

In sum, direct observations of sexual behaviour of the type done by Masters and Johnson

have some distinct advantages but also some disadvantages compared with survey-type research. Their research avoids the problems of self-reports and is capable of answering much more detailed physiological questions than self-reports could. But the research is costly and time-consuming, making large samples impractical; furthermore, a high refusal rate is probably inevitable, so probability samples are impossible to obtain.

## PARTICIPANT-OBSERVER STUDIES

**Participant-observer technique:** A research method in which the scientist becomes part of the community to be studied and makes observations from inside the community.

A research method used by anthropologists and sociologists is the **participant-observer technique**. In this type of research, the scientist tries to become a part of the community to be studied, and she or he makes observations from inside the community. In the study of sexual behaviour, the researcher thus may be able to get direct observations of sexual behaviour combined with interview data.

Examples of this type of research are studies of sexual behaviour in other cultures, such as those done in Mangaia, Mehinaku, and Inis Beag, which were discussed in Chapter 1. Two other examples are Laud Humphreys's study of the tearoom trade and Charles Moser's study of S/M (somasochistic) parties.

### HUMPHREYS: THE TEAROOM TRADE

Sociologist Laud Humphreys (1970) conducted a participant-observer study of impersonal sex between men in public places. Briefly, Humphreys acted as a lookout while men engaged in sex acts in public restrooms ("tearooms"); his job was to sound a warning if police or other intruders approached. This permitted Humphreys to make direct observations of the sexual behaviour. He also got the licence-plate numbers of the men involved, traced them, and later interviewed them in their homes under the pretext of conducting a routine survey.

Humphreys obtained a wealth of information from the study, but in so doing he violated several ethical principles of behavioural research. He had no informed consent from his subjects; they were never even aware of the fact that they were participants in research, much less of the nature of the research. Thus, this study was quite controversial.

### S/M PARTIES

Sex researcher Charles Moser observed S/M (somasochistic) interactions in semi-public settings in the United States, attending more than 200 S/M parties (Moser, 1998). Parties are typically highly scripted. The person who gives the party may advertise it widely (e.g., on the Internet) or may issue personal invitations to only a very selected list. The parties may have a particular theme, such as female dominant/male submissive only or women only. The party might be held at a person's home or in a rented space.

Each party has a particular set of rules, which vary from one party to another, and guests may be required to sign a written agreement to follow the rules. Issues covered in these rules include who may talk to whom (can a submissive be spoken to?), who may play with whom, who may have sex with whom, prohibited S/M or sexual behaviours, what constitutes safer sex, not blocking equipment by sitting on it, and so on. Drunkenness is never acceptable; some parties allow wine or beer, but others ban all alcohol.

Some individuals plan to have a first "date" at a party. Parties clearly have the function of ensuring safety for participants, since others are always present if an interaction goes too far. Potential partners negotiate what kind of interaction they desire—for example, pain versus humiliation.

Perhaps most interesting is the fact that coitus and genitally focused activity designed to produce orgasm are very rare at these parties. The participants describe the S/M experience as highly sexual, but orgasm typically is not the goal.

Moser did not report that he obtained informed consent from the people he observed. However, their behaviour was public, leading to a relaxation of human subjects regulations. In his report, he was careful not to divulge any identifying information about individuals.

## EXPERIMENTAL SEX RESEARCH

All the studies discussed so far have had one thing in common: they were all studies of people's sexual behaviour as it occurs naturally, conducted by means of either self-reports or direct observations. Such reports are **correlational studies**; that is, at best the data they obtain can tell us that certain factors are related. They cannot tell us, however, what causes various aspects of sexual behaviour.

For instance, suppose we conduct a survey and find that women who masturbated to orgasm before marriage are more likely to have a high consistency of orgasm in marriage than women who did not. From this it would be tempting to conclude that practice in masturbating causes women to have more orgasms in heterosexual sex. Unfortunately, this is not a legitimate conclusion to draw from the data, since many other factors might also explain the results. For example, it could be that some women have a higher sex drive than others, which causes them to masturbate and also have orgasms in heterosexual sex. Therefore, the most we can conclude is that masturbation experience is related to (or correlated with) orgasm consistency in marital sex.

An alternative method that does allow researchers to determine the causes of various aspects of behaviour is the **experiment**. According to its technical definition, in an experiment one factor must be manipulated while all other factors are held constant. Thus, any differences among the groups of people who received different treatments on that one factor can be said to be caused by that factor. For obvious reasons, most experimental research is conducted in the laboratory.

As an example of an experiment, let us consider a study that investigated whether being interviewed face-to-face causes children to underreport their sexual experiences (Romer et al., 1997). The participants were approximately 400 low-income children between the ages of 9 and 15. Some were assigned to a face-to-face interview with an experienced adult interviewer of their own gender. Others were assigned to be interviewed by a "talking computer," which had the same questions programmed into it. The questions appeared on the screen and, simultaneously, came through headphones for those who were not good readers. Presumably in the talking computer condition, the child feels more of a sense of privacy and anonymity and therefore responds more truthfully.

Among 13-year-old boys interviewed by the talking computer, 76 percent said they had "had sex," compared with only 50 percent of the boys in the face-to-face interview. Forty-eight percent of 13-year-old girls interviewed by computer said they had had sex, compared with 25 percent of those interviewed by a human. The children clearly reported more sexual activity to the computer than to a human interviewer.

In the language of experimental design, the *independent variable* (manipulated variable) was the type of interview (computer or human interviewer). The *dependent variable* (the measured variable) was whether they reported that they had had sex (there were a number of other dependent variables as well, but a discussion of them would take us too far afield).

The results indicated that those interviewed by humans reported significantly less sexual activity than those interviewed by computer. Because the research design was experimental,

### Correlational study:

A study in which the researcher does not manipulate variables but rather studies naturally occurring relationships (correlations) among variables.

### Experiment:

A type of research study in which one variable (the independent variable) is manipulated by the experimenter while all other factors are held constant; the researcher can then study the effects of the independent variable on some measured variable (the dependent variable); the researcher is permitted to make causal inferences about the effects of the independent variable on the dependent variable.



**Figure 3.8** An innovation in surveys of children is the use of "talking computers" to ask questions, with the child entering her answers using the mouse or the keyboard.

we can make causal inferences. We can say confidently that the type of interview had an effect on children's answers. We might also say that a face-to-face interview causes children to underreport their activity. That statement is a bit shakier than the previous one, because it assumes that the answers given to the talking computer were "true." It is possible that children overreported or exaggerated in responding to the computer and that their answers to the human interviewer were accurate.

Experimental sex research permits us to make much more powerful statements about the causes of various kinds of sexual phenomena. As for disadvantages, much of the experimental sex research, including the study described here, still relies on self-reports. Experimental sex research is time-consuming and costly, and it can generally be done only on small samples of participants. Sometimes in their efforts to control all variables except the independent variable, researchers control too much. Finally, experiments cannot address some of the most interesting, but most complex, questions in the field of sexual behaviour, such as what factors cause people to develop a heterosexual, homosexual, or bisexual orientation.

## SUMMARY

Knowledge of the major methods that have been used in sex research and of the problems and merits associated with each is necessary for understanding and evaluating sex research. Sex research can use quantitative or qualitative methods.

Ideally, quantitative sex research should employ probability sampling techniques.

Large-scale surveys of sexual behaviour generally rely on people's self-reports, which may be inaccurate because of purposeful distortion, problems of memory, or an inability to estimate some of the information requested. Direct observations of sexual behaviour avoid these problems, but they lead to an even more restricted sample. They also answer questions that are somewhat different from those answered by surveys. Web-based surveys offer new opportunities for sex research.

In all behavioural research, the ethical principles of informed consent, protection from harm, and justice must be observed, although historically some sex researchers did not do this.

The following statistical terms were introduced: average, mean, median, mode, variability, incidence, frequency, and correlation.

No major national sex surveys have been conducted in Canada. However, there are two large-scale U.S. surveys of sexual behaviour: Kinsey's

interview study and the recent NHSLS, which was based on probability sampling. The Canada Youth, Sexual Health, and HIV/AIDS Study assessed adolescent sexuality across Canada. It is difficult to draw any general conclusions from large magazine surveys because the samples are so restricted.

Canadian studies of special populations include a qualitative study of exotic dancers by Maticka-Tyndale and a survey of First Nations peoples headed by Myers.

In media content analysis, researchers use systematic coding categories to analyze what is represented in the media, such as on television, in romance novels, or in magazine ads.

In participant-observer studies, the scientist becomes a part of the community to be studied, and uses a combination of direct observations and interviewing. Examples are studies of sexual behaviour in other cultures, Humphreys's study of the tearoom trade, and Moser's study of S/M parties.

In experimental sex research, the goal is to discover what factors cause or influence various aspects of sexual behaviour. The researcher manipulates an independent variable and measures a dependent variable.

## QUESTIONS FOR THOUGHT, DISCUSSION, AND DEBATE

1. Find a recent sex survey in a magazine. Evaluate the quality of the study, using concepts you have learned in this chapter.
2. Of the research techniques in this chapter—surveys, laboratory studies using direct observations, media content analysis, participant-observer studies, experiments—which do you think is best for learning about human sexuality? Why?
3. You want to conduct a survey, using face-to-face interviews, to determine whether there are differences between Asian-Canadian and white-Canadian teenagers ages 15 to 19 in their sexual behaviour and attitudes. In what ways would you tailor the research methods to make them culturally sensitive?
4. Imagine that you have been hired by your college or university to produce a report on the patterns of sexual behaviour of the students there, with the goal of helping the administration plan better in areas such as health services and counselling. You are given a generous budget for data collection. How would you go about collecting the data you would need to produce a truly excellent report?

## SUGGESTIONS FOR FURTHER READING

Matsumoto, David. (1994). *Cultural influences on research methods and statistics*. Pacific Grove, CA: Brooks/Cole. This concise book, written for undergraduates, explains principles of cross-cultural research and how one should modify research methods depending on the culture being studied.

Michael, Robert T., Gagnon, John H., Laumann, Edward O., & Kolata, Gina. (1994). *Sex in America: A definitive survey*. Boston: Little, Brown.

This book reports the results of the NHSLs, and is written for the general public.

Wiederman, Michael W. (2001). *Understanding sexuality research*. Belmont, CA: Wadsworth. This slim volume, written for undergraduates, takes up where the present chapter leaves off and offers an excellent analysis of methodological issues in sex research, with interesting examples.



For review questions, web resources, and other learning and study tools, visit the *Understanding Human Sexuality* Online Learning Centre at [www.mcgrawhill.ca/olc/hyde](http://www.mcgrawhill.ca/olc/hyde).