

Chapter 3: Part 1

Conducting Research on Sexuality

In Chapter 2 we learned about the major behavioral science theories used to explain human sexuality. How are such theories created? How do we know whether a theory is accurate? Many times the answer to both questions is through conducting *empirical research*. By *empirical* we mean research that is based on scientific methods, where theoretical predictions can be tested through systematic observation and experimentation.

In many cases, empirical research is conducted to test predictions and explanations based on theory. Then, as research findings accumulate, these results often influence theory. Either traditional theories are revised to fit the results of research (to make the theories more accurate), or new theories are constructed to explain the research results that are not explained adequately by other theories.

It is important to recognize that there is research in the abstract and research in reality. In an ideal world, research on sexuality would be conducted in a completely objective manner, and any sexual topic or question that arose could be researched empirically. In reality, however, research is conducted by people who study other people. This fact makes conducting research much messier than in the ideal case.

People are products of their cultures. So, research on sexuality is influenced by personal and cultural beliefs. The result? It is difficult, if not impossible, to carry out sexuality research in a completely objective way. For one, the ways researchers see the world are influenced by the cultures in which they were raised and continue to live. Also, because sexuality research is conducted within cultures, there are always certain beliefs and limitations that influence what and how sexuality research can be carried out.

For example, it is difficult to study childhood sexuality, and as a result we have relatively little empirical research on this topic. Why? In Western culture, people commonly believe that children are asexual—they do not have any sexual thoughts or feelings. This belief probably follows from a larger notion of childhood as a time of innocence. Because children are generally believed to be asexual, it often does not even occur to people (including researchers) to ask questions about childhood sexuality that could be answered through empirical research. Those researchers who attempt to study childhood sexuality typically run into opposition from parents, schools, and governments. The fear is that simply asking the sexually innocent children about sexuality will corrupt the children by opening their eyes to things they have never thought or felt.

Because sexuality research is carried out by people in a cultural context, we should try to be aware of how personal and cultural influences shape the topics that are studied. We should consider why the research was conducted, or what the researchers intended to find. Clues as to the reasons for the research are often found in the hypothesis statement or research question.

An *hypothesis* is simply a prediction, such as “Men and women differ in the sexual attitudes.” Sometimes researchers do not make a prediction, but rather set out to answer a research question, such as “What is the relationship between feelings of love for a sexual partner and likelihood of using a condom?” Why is it important to consider the reasons the research was conducted or what the researchers expected to find? Hypotheses or research questions may tip us off with

regard to possible agendas or biases the researchers hold.

For example, consider one published study of adolescents who had not experienced vaginal intercourse. One of the stated research questions was, “What reasons do abstinent adolescents give for not becoming sexually active?” (Blinn-Pike, 1999, p. 297). This research question is rather straightforward and objective. However, in the introduction to the study, the author wrote extensively about the harm associated with teen sexual activity and the need to foster “resilient” youth who remain abstinent.

To determine adolescents’ reasons for abstinence, the researcher presented respondents with a list of 18 reasons and asked teens to indicate whether each was a reason he or she was sexually inactive. Given the personal beliefs the researcher revealed in her description of the study, it is not surprising that her list of reasons for abstinence did not include anything referring to “not having had the opportunity.” Teens who would like to have had sexual experience but who have not simply because they lacked the opportunity were not given a way to express their opinions. The questionnaire the researcher constructed may have been influenced by her personal assumptions about why teens would not engage in sexual intercourse (e.g., “waiting for marriage” or “fear of AIDS”).

The hypothesis, research question, or reasons for the research will determine the type of research that is carried out, or the research design that is chosen by the researchers. Each type of research has certain strengths and weaknesses. To become savvy consumers of sexuality research findings, and to be able to critically examine knowledge claims we encounter, we need to be familiar with those different types of research.

Types of Research

Descriptive Research

Descriptive research is meant to describe the state of affairs with regard to a certain sexual behavior, experience, or attitude. Research designed to determine parents’ attitudes toward their children’s masturbation, the percentage of people who have had extramarital sex, or the frequency of oral sex among dating couples are all examples of descriptive studies.

Particular types of descriptive research include case studies and focus groups. A *case study* involves an in-depth analysis of a particular person (case) or small set of people. Because such in-depth knowledge is difficult and time-consuming to gather, case studies often occur in certain circumstances in which the researcher has unique access to the person or people being studied. For example, many case studies are focused on individuals being treated for a disorder. Through the course of diagnosis and treatment, a great deal of information is gathered and then used to describe the case. The primary advantage of cases studies is the rich level of analysis that is possible, which is especially useful when studying a rare phenomenon and there are few opportunities to study the phenomenon empirically. The primary disadvantage is the possibility that what is learned from case studies may not apply to others.

Focus groups involve in-depth discussions of particular topics within small groups of individuals who are similar in important ways. For example, to study perceptions of condoms among African-American male adolescents, researchers might conduct a series of focus groups. Each

group discussion might involve 6-8 African-American male adolescents and take place over the course of 90 minutes. Compared to cases studies, focus groups do not result in as much information about each research participant, but information about a focused topic is gathered from several individuals. Advantages of focus groups include the ability for researchers to hear what people say in their own words, and the group discussions often help people to relate their own experience to what is being discussed. Primary disadvantages include some people being reluctant to share personal information in a group and being influenced by what other group members say. For this reason, it is often important that focus group members be similar in certain ways, such as gender, sexual orientation, and level of sexual experience.

Descriptive studies do not tell us anything about relationships among variables or what causes particular attitudes or behavior. However, research on any particular sexuality topic generally begins with descriptive studies that document that there is something that needs further study. From what is learned through initial descriptive studies, researchers are able to then design relevant experimental, quasi-experimental, or correlational studies.

Experimental Research

Research is of the *experimental* type when the researchers manipulate (change) some variable(s) and examine the effect of that manipulation. For example, researchers interested in the effects of exposure to pornography on men's attitudes toward women might measure such attitudes in two groups: the first group (a *control group*) is not exposed to any visual media, or perhaps only to media with nonsexual content, whereas the second group (an *experimental group*) is shown a set amount of pornographic media. As long as participants are randomly assigned to either of the two groups, the researchers assume that they are similar in all aspects except exposure to pornography. If the two groups subsequently differ in their reported attitudes toward women, we can conclude that exposure to the pornography affected the men's attitudes.

Because the goal of an experiment is to determine the effect of a particular variable, it is important that research participants be randomly assigned to the control and experimental conditions. If participants are not assigned to conditions in a way that is truly random, there is always the possibility that any difference in the results found between the conditions is due to the participants in each group having been different in some way from the start. In our current example, what if researchers assigned those participants who showed up first to the experiment to the pornography exposure condition and those participants who showed up later to the control condition? If the two groups subsequently differ in their attitudes toward women, is it due to the experimental manipulation or some pre-existing difference between the two groups of men? Perhaps men who showed up first are more conscientious and concerned about what others think of them (which explains why they were more likely to show up early or on time for the experiment). This personality difference might account for their differing responses to questions regarding their attitudes toward women.

Because the goal of an experiment is to determine the effect of a particular variable, it is also important that the experimental conditions vary *only* with regard to the variable of interest. Imagine a set of 3 photographs, each of which varies in its level of nudity. Suppose researchers were interested in how women's degree of nudity affects how those women are perceived. Researchers may randomly assign respondents to view one of the 3 photos and make judgments regarding the woman in the photo. However, if there are differences in the way the women are

perceived, is it due to the level of nudity? The women in the 3 photos may also differ with regard to hair, facial features, body posture, camera angle, and other variables. To conclude that level of nudity affected perceptions it would be necessary to use the same model in all 3 photos and to hold everything constant except the level of nudity.

When there are potential problems with the way participants were assigned to each experimental condition, or the ways the experimental and control conditions were different, the study is said to have low or poor *internal validity*. Another potential problem with experimental research is that often the experimental manipulation does not match reality very well. When the results from an experimental study do not fit with what one would find in the real world, the study is said to have low or poor *external validity*.

Why might an experiment result in low external validity? To return to the example of men being exposed to pornography, it is unlikely that the amount of exposure to pornographic media in the experiment would be anywhere close to the amount experienced by men who seek out pornography in their personal lives. Because the exposure to pornographic media in the experiment is limited, only one or a few particular film clips or photographs will be used. Are these representative of all pornographic films or photos that are available to consumers? Also, if the men are randomly assigned to the two experimental conditions, then many of the men who are exposed to the pornographic media are not men who would expose themselves outside of the research setting. The way these men are affected by the exposure to pornography may not mirror how men who seek out pornography in the real world would be affected.

Another threat to the external validity of experiments is *reactivity*, which refers to the fact that research participants may act differently in an experiment than they would in real life because they are aware they are being studied. Unfortunately, it is often difficult to predict the ways in which research participants might act differently. Many participants will be on their best behavior, and may try to do what they believe the experimenter wants them to do. Other research participants may resent being required to perform some research task, or may wish to assert their independence, and might then intentionally behave in the opposite manner from what they think the researcher expects.

Quasi-Experimental Research

Recall that an important aspect of an experiment is the random assignment of participants to control and experimental conditions. However, sometimes researchers are not able to perform such random assignment, and must make do with the groups available. For example, suppose researchers were interested in evaluating the effect of a therapy program on sexual dysfunction. In an experiment, people seeking treatment for a sexual problem would be randomly assigned to a treatment group or a control group that did not receive treatment. However, suppose that, as potential research participants telephoned a sex therapy clinic seeking help, the researchers were not allowed to deny treatment so that they could form a comparison group. Luckily, at least for the researchers, at some point the clinic received more patients than can be treated at one time, so people calling after that point were put on a waiting list.

Now the researchers can examine the degree of improvement in sexual functioning between the patients receiving treatment and those waiting to receive treatment. Because one group is being treated differently than the other group, this type of study resembles an experiment. However,

because there was no random assignment, this research design is *quasi-experimental*. Unfortunately, without random assignment to the two groups, the researchers cannot be sure that the groups are alike in all respects other than having received treatment. There is the possibility that differences in the rate of improvement between the two groups might be due to something other than treatment. Still, it is better to perform a quasi-experiment than no research at all.

Correlational Research

In contrast to the experiment, most research on human sexuality is *correlational*. That is, variables are not manipulated or changed by the researchers, but rather the researchers measure at least two variables and examine relationships between them. The resulting correlation coefficient (abbreviated r) can range from -1.00 to 1.00. The presence or absence of a negative sign simply indicates the *direction* of the relationship between the two variables and has nothing to do with the strength of the relationship. With a correlation, a negative sign indicates that as the value of one variable increases the value of the other variable decreases. The absence of a negative sign indicates that as the value of one variable increases the other increases as well.

For example, suppose researchers find a correlation of -.42 between number of dates college students go on and how lonely those students feel. These researchers also find a correlation of .23 between students' physical attractiveness and their number of dates. These correlation coefficients tell us that those students who go on more dates feel *less* lonely and that the students who are more physically attractive go on *more* dates. The value of the correlation coefficients tells us that the relationship between number of dates and loneliness is stronger than the relationship between number of dates and physical attractiveness.

When interpreting results of correlational research, conclusions as to cause-and-effect are speculative at best. All the researchers can say for sure is that the two variables appear to be related. However, because the researchers did not manipulate either variable, it is unknown which variable affects the other, or whether both are due to some other (third) variable or set of variables. In our current example, does going out on dates lead to less loneliness? Does being less lonely make one more likely to go out on dates? Perhaps loneliness and dating are related not because one causes the other but because both are caused by something else. Maybe being depressed leads to feelings of loneliness and lack of interest in dating. Perhaps dating and loneliness are correlated simply because those respondents who are most willing to admit to feeling lonely are also the ones most willing to admit that they do not go out on many dates.

Cross-Sectional Versus Longitudinal Research

Regardless of whether researchers are conducting a descriptive, experimental, quasi-experimental, or correlational study, they typically measure variables at one point in time. That is, data from each research participant is gathered just once. We refer to this as a *cross-sectional* research design. In contrast, sometimes researchers gather data from the same individuals at two or more points in time. Such *longitudinal* research allows the researchers to gauge whether, for each individual, there are changes in certain variables over time, or whether a particular variable or manipulation at one point has an effect on another variable at a later point. Each basic type of research (descriptive, experimental, correlational) could be carried out in a cross-sectional or longitudinal fashion. However, cross-sectional and longitudinal research are generally best suited to different types of research questions.

Suppose researchers hypothesize that rates of sexual activity decline with the length of time individuals are married. Because the researchers cannot randomly assign research participants to marriages of various lengths, by necessity the research will be correlational. However, the researchers have a choice between cross-sectional or longitudinal measurement of sexual activity. A cross-sectional design would involve measuring rates of sexual activity within marriages of varying duration, then correlating the length of time the couple has been married with how frequently they engage in sexual activity. If there is a negative correlation, the researchers report that those who had been married longest reported the least frequent sexual activity (or conversely, those married most recently reported the most frequent sexual activity).

In this case the researchers do not know whether some aspect involved in being married longer causes declines in sexual activity. The reason is that the research participants who have been married longest are also among the oldest respondents. So, the fact that they, as a group, report less frequent sexual activity compared to the younger respondents may be due to having been members of an earlier generation, raised in a time of different cultural values (this is referred to as a *cohort effect*). The researchers are left wondering whether these same individuals have always had a relatively lower rate of sexual activity or whether the rate of has declined as their marriage endured (which is the researchers' hypothesis).

A longitudinal design would allow the researchers to more adequately test their hypothesis. In such a study, the same individuals would be followed over time to see if rates of sexual activity systematically change. Of course, if there are declines, the researchers are still left with the question of "why?" or what is behind such changes, but at least there would be documentation that such declines occur (at least within that sample). If researchers using a cross-sectional design conclude that sexual activity declines with length of marriage, we should be skeptical that sexual activity becomes less frequent over time within individual marriages.

In conclusion, solid research starts with a solid research question; one that can be addressed adequately with the methods the researchers choose or have at their disposal. Regardless of the type of research design chosen, researchers rely on people to participate as respondents. One important issue to consider is where the research participants come from.

What Kind of Person Participates in Sexuality Research?

Sexuality research relies on people agreeing to participate, which typically involves sharing sensitive information about themselves, their experiences, attitudes, and reactions, all with total strangers (the researchers). Such participation, even if completely anonymous, still requires time and energy. Who are the people willing to give their time and energy to reveal potentially sensitive information about themselves? What is their motivation for doing so? These are important questions to ask when assessing the extent to which the research findings accurately reflect what one would find among people in general. Here we are referring to the *generalizability* of the research findings.

Generalizability

Researchers start with a *population* of interest, whether it be all people, or adolescent boys, or African-American lesbian women. Because it is typically impossible, or at least not feasible, to

study every member of the population of interest, researchers must rely on studying a selected group, or *sample*, of those individuals. Results are generalizable to the extent that the findings of the study (which are based on the sample) mirror what one would find in the larger population of interest. Ideally, a research sample would be perfectly *representative* of the population of interest (that is, all members of the population would have an equal chance of being included in the research). In reality, this is impossible to achieve as there are always some potential participants who could not be contacted or who refuse an invitation to take part in the research.

The larger concern is the extent to which a particular sample differs from the population of interest. If the people in the sample differ in important ways from the larger population from which they were drawn, we should question the extent to which the findings apply to the people in the population who were not part of the research sample. In such a case, we might refer to the sample as *biased* in the sense that it is not truly representative. Notice that we are not saying that the individuals in the sample are biased toward the topic that is being studied, but rather that the sample as a whole is biased to including more of a particular type of person than exists in the population.

Obtaining representative or unbiased samples may be especially problematic when the population of interest is small or difficult to access. For example, members of ethnic minority groups are not adequately represented in most sexuality research. If the population of interest is a stigmatized group, such as people who are sexually aroused by feet, researchers often must be creative in gaining access to a sample from that stigmatized group. In these difficult cases, frequently the goal is simply to obtain a large enough sample to warrant analysis, rather than a representative sample per se. For example, how might researchers go about locating a large sample of gay men or lesbian women, or adults who have had sexual contact with children, or individuals who become sexually aroused by wearing rubber garments? Researchers might locate a social club, advocacy group, or Internet site frequented by members of the population of interest. However, certainly not everyone in the population of interest participates in such groups, leaving the question of how those individuals who do might differ in important ways from members of the population of interest who do not.

Ultimately, to whom are researchers intending to generalize? The answer varies from study to study, yet there are some common assumptions. For example, there are cross-cultural differences in many aspects of sexuality. So, when researchers employ a sample of respondents from the United States and write, "Based on the findings, it appears that men are more likely than women to stimulate their own genitals for pleasure," the assumption is that we are talking about men and women in the United States. We need to remember that research results based on a sample drawn from one culture may not generalize to people in other cultures.

Volunteer Bias

Even when researchers are simply trying to generalize to the group from which they drew a sample, the extent to which that is possible rests on the degree of potential *volunteer bias*. Remember that not everyone from the population of interest who is given the opportunity to participate in a study actually agrees to do so. People are free to decline an invitation to participate in research, so some people will choose that option, perhaps because they do not have the time or interest to participate. This is true about research in general, but imagine how the issue may be most relevant when the research is on a sensitive topic such as sexuality. So,

perhaps it is not surprising that even in the most extensive and well-conducted national sexuality surveys, where great care is taken to select a nationally-representative sample, only about 70-80% of those people initially selected to participate actually do so.

Are there differences between those individuals who agree to participate in sexuality research and those who do not? In general, volunteers for sexuality research may be more likely to be male, relatively young, more sexually experienced, more comfortable with sexual topics, and more liberal in their sexual attitudes compared to non-volunteers. So, when researchers investigate people's sexual attitudes and experiences, they may be examining a group who tend to differ from the general population.

In addition to these differences between volunteers and non-volunteers, the more sensitive or revealing the information requested, or the more sexually explicit the requirements of participation, the more likely the sample may deviate from the general public. Typically, when asked to complete a brief, anonymous survey on their attitudes toward premarital sex, only a small proportion of potential respondents will refuse. However, if the same sample of potential participants is asked to complete a face-to-face interview regarding their sexual experiences, a larger proportion of people will refuse. If the same group is asked to view sexually explicit videos while their genital responses are recorded using special instruments, an even greater proportion of people will refuse. The more sensitive or involved the research, the more concerned we should be about the generalizability of the results.

It is important to recognize that a large proportion of research on human sexuality is based on college student participants. Students are often a captive audience, are familiar with completing surveys, and may be most open to answering questions of a sexual nature. In addition, sexuality researchers often have a difficult time securing governmental or other funding, leaving them to employ whatever samples are readily available (often called *convenience samples*). Because most sexuality researchers are university faculty, it stands to reason that they would turn to students as research participants.

Does the representativeness of the sample really make that much difference? Like so many questions in life, the answer is "it depends." Some researchers have argued that if a hypothesis is that two particular variables are related among people in general, it really does not matter that one is testing the hypothesis with a biased sample because the relationship should still exist. It is possible, however, that the relationships exist for some groups of people and not others, or that the strength of the relationship between the variables varies across groups.

Only replication of a particular study reveals whether the results generalize well. If several researchers, each using at least slightly different methods and samples, find generally the same thing, we can have greater confidence that the results of any one of those studies generalizes to the larger population of interest.

What do the Research Results Mean?

Last, are the conclusions sexuality researchers draw from their findings, or the ways in which they characterize their findings, legitimate given the nature of the research? As an example, suppose sexuality researchers claim that their findings show that living together before marriage

results in increased likelihood of divorce. The researchers are basing this conclusion on the finding that a greater proportion of people who lived together prior to marriage divorced within five years when compared to respondents who had not lived together (see Cunningham & Antill, 1994, and DeMaris & Rao, 1992, for examples). Although the researchers found such a correlation, the conclusion implies that there is something about premarital cohabitation that causes an increased risk for divorce.

Recall, however, that correlational research does not allow us to draw conclusions about causality. In this case, there may be some other variable or set of variables that is related to both cohabitation and divorce that better explains their apparent relationship. For example, people who lived together before marriage may be less religious and hold more liberal attitudes regarding relationships, sexuality, and family compared to those couples who did not live together. People who are less religious and hold liberal attitudes about relationships may also be more open to the possibility of divorce when things are not going well in the marriage. These group differences in religiosity and attitudes (which existed before cohabitation) may best explain why those who chose premarital cohabitation were also more likely to divorce.

Rosenthal (1994) referred to researchers' tendencies to imply causal relationships between their variables as "causism." He noted that writers may not come out and say that their correlational results indicate a causal relationship, yet they may describe their findings using such words as *effect*, *impact*, *consequence*, or *the result of*. In using such words when describing relationships between two variables, the implication is that one variable caused the other or at least influenced it. Such words distract the reader from the important point that the results are simply correlational, and that all we can say for sure is that the two variables demonstrate a statistical relationship (and perhaps a weak, yet statistically significant, one).

If researchers do not consider possible third variables that might explain the correlation between any two variables, there is the possibility that the findings will be misleading. For example, in one study the researchers found that religiosity and engaging in risky sexual encounters were negatively correlated among college women (Poulson, Eppler, Satterwhite, Wuensch, & Bass, 1998). That is, those college women in the sample who were most religious were least likely to report having engaged in risky sex. However, they also found that religiosity and risky sex were related to an important third variable: alcohol consumption. It appears that religiosity and risky sex were related to each other because each of these variables was related to likelihood of drinking alcohol prior to engaging in sexual activity.

In another example, researchers reported that respondents with less than a high school education were about half as likely to report having had a sexually transmitted disease (STD) compared to respondents with at least a high school education (Tanfer, Cubbins, & Billy, 1995). If that is the only statement you encounter, it might be tempting to conclude that people with greater education are actually more likely to contract an STD. However, STD infections were self-reported, and educational level may be related to both awareness of STDs and the likelihood of having access to healthcare (so that an STD might be detected). It is likely that the most educated respondents in the sample were most aware of STDs and their symptoms, and most likely to seek medical care that might result in detection of any STDs that are present. Accordingly, all we can conclude from this study is that more educated respondents were more likely to report having had an STD, with a strong emphasis on the word *report*.

There are numerous ways in which the limitations or flaws in a research study might be glossed over when it comes to drawing conclusions about the findings. These include making generalizations that are not warranted based on the sample. For example, surveying college students about attitudes toward condoms and concluding from those results that people in general hold certain attitudes. It is also common not to recognize the limitations of the measures or questions that were presented to respondents. For example, researchers may ask respondents about their sexual experiences and draw conclusions based on the answers that imply that the respondents did indeed have such experience. To do so does not explicitly recognize the possibility that the answers respondents provided were inaccurate due to problems with memory, difficulty understanding the intended meaning of the questions, and concerns over presenting themselves in a socially desirable (positive) light.

To return to the religiosity and risky sex study described above (Poulson et al., 1998), perhaps religiosity was not related to actual consumption of alcohol or engaging in risky sex among the college women in the sample, but rather the most religious women in the sample were most likely to distort their self-reported alcohol consumption and experience with risky sex. Similarly, to return to the education and STD study described above (Tanfer et al., 1995), perhaps respondents with the least education reported the fewest STDs not because of a reduced incidence of STDs among this group, but because of a greater tendency to distort their memory of having had STDs or a greater tendency to lie about such STDs.

In the end, empirical research is the best tool we have for expanding our knowledge about human sexuality. At the same time, research and researchers are imperfect. There are always limitations to any particular sexuality study. Our goal in this chapter was to become more savvy evaluators of knowledge claims based on sexuality research. Doing so is a process involving practice, which we will gain throughout this course. However, we needed to start with a solid understanding of research basics as discussed in this chapter.