

Sex Research

Human beings study sex because we are curious.

The scientific study of sexuality is called sexology.

Scientists who study anything (including sex) generally have three goals for their studies:

(1) To increase understanding

For example: scientists might want to understand what happens to our bodies when we become sexually aroused

(2) To be able to use understanding for predicting

For example: scientists might want to be able to predict how sexually transmitted infections such as AIDS will spread through a population based on the sexual behaviors of that population

(3) To be able to use understanding for controlling

For example: scientists might want to help individuals or couples, who have difficulty achieving erections or orgasms, to learn to control their bodies in ways that help them have more pleasurable sexual encounters

The most controversial of the three goals, and the one that people have the most ethical concerns about, is the goal of controlling.

For example: how should knowledge about human reproduction and infertility treatments and contraceptives be used to control who has what types of children (male, female, free from a specific disease), and how many children (limit of 2 per pregnancy, or up to 8 per pregnancy)?

Scientists have four main methods by which they can collect information about something that they wish to study (such as sexual behavior):

(1) case studies

(2) surveys

(3) direct observation

(4) the experimental method

We will look at how each of these four methods is used – and what are the particular advantages and disadvantages of each method. We will also look at the way some pioneers of sex research used these methods in their own quest for knowledge.

Case studies examine an individual person in great detail.

Sometimes a small number of individuals, who share a similar behavior or characteristic, are each studied in great detail. Individuals may be studied by observing them, asking them questions (and asking questions of others who know them such as parents, doctors, or lovers), testing them, and even having them participate in experiments.

One advantage of case studies is the fact that the researcher can be flexible in taking advantage of many different ways of collecting information. Another advantage is how much detail or depth the researcher can get from one person. Some case studies might involve months or even years of collecting information about a single individual.

One disadvantage of case studies is that when the researcher is done with their study, they do not necessarily know if what they have discovered to be true of the individual who they studied, is necessarily true for other apparently similar individuals. Another way of saying this is, that there is limited generalizability of findings.

Surveys ask people questions and collect their answers.

Sexologists who use surveys can ask about sexual experiences, thoughts, behaviors and/or attitudes.

People can be asked questions face-to-face, via telephone, via a computer, or via printed materials.

One **advantage** of surveys is that they can usually collect information in a relatively quick and inexpensive way. Surveys can therefore be used to collect information from a large number of people (rather than just a few people).

Disadvantages of surveys include the fact that not everyone is willing to participate in a survey (the problem of **nonresponse**), that people who take the survey may be different from people who don't take the survey (the problem of **self-selection bias**), that the persons selected by the researcher to participate in the survey may not be similar to the larger population being studied (**demographic bias**), and that not everyone who participates in a survey will answer every question accurately.

There are over 7,000,000,000 (7 billion) people on earth.

There are over 300,000,000 (300 million) people in the United States of America.

Obviously it would not be possible to survey every person in the world or even in the United States of America.

It is not even possible to study every individual in some sub-group such as married persons, homosexual persons, or persons aged 20-30.

If we are interested in studying all married persons in the USA, we would call that our **target population**.

We would then select a smaller **survey sample** that should ideally resemble our target population as closely as possible. The survey sample would include only as many people as we can afford to question, given a limited amount of time and money. It would be ideal if what we find out from our survey sample is similar to what we would find out if we had the time and money to ask everyone.

To be able to extrapolate our findings from the survey sample to the target population we should strive for a representative sample. A **representative sample** is chosen in such a way as to represent the target population by being as similar as possible in how it is composed of various subgroups. For example if the US population is 78% white, 17% hispanic, and 13% black, then a representative sample should also be 78% white, 17% Hispanic, and 13% black. If the US population is 51% female, then a representative sample should also be 51% female. If 14% of the US population is 65 years or older, then 14% of individuals in a representative sample would be over 65.

In a **random sample**, individuals are selected randomly to participate in a survey. It is quite likely that a random sample will not be perfectly representative of the target population. However, since selecting a representative sample takes a lot of time and effort (and money), random samples are often used.

When scientists attempt to do survey research they will invariably encounter the problem of non-response. **Non-response** refers to the fact that some people who are asked to participate in a survey will refuse. It is quite possible that the group of people who refuses to participate – if they had answered all the survey questions – would have answered some questions differently than the group of people who were willing to participate.

Self-selection bias occurs when individuals who choose (or select) to participate in the survey are different from the general population – for example by being more sexually experienced, or holding a more positive attitude towards sex.

Demographic bias occurs when the individuals that are surveyed come largely from certain subgroups in our society and do not include enough (or any) individuals from other subgroups. For example, a survey sample might include a lot of well educated, middle class, White males, and not many (or any) individuals from less educated, low income, or extremely wealthy, or Hispanic, or Black, or Asian, or female groups.

Probably the most famous example of the use of surveys to study human sexuality was provided by the scientist **Alfred Kinsey** (1894-1956). His books were widely read and discussed, and his findings changed the way people talked and thought about sex. To understand why Kinsey's studies had such an impact on the people who first heard about them, it is important to know a little bit about how people thought and behaved in the time period in which Kinsey lived and worked.

In the **Victorian time period** (the time when Victoria was queen of England 1837-1901), many people had somewhat different ideas about sexual behavior than people have today. For example, many Victorian people were taught that sexual intercourse should not occur more often than every 2 weeks to 2 months. Many Victorian people were also

taught that the main cause of insanity was masturbation, and that masturbation could cause many other health problems as well. By contrast, recent studies might be interpreted to indicate that masturbation can actually have health benefits, such as decreasing the incidence of prostate cancer.

Kinsey was born in the Victorian time period, and raised by parents who were arguably even more directly influenced by Victorian thinking. Kinsey began his scientific career by studying insects (entomology) – his particular research interest being the gall wasp. Kinsey taught entomology at Indiana University. He eventually began to teach classes in human sexuality (called “marriage classes” in those days). Through his teaching job he became aware of how little information was available on the topic of human sexuality in his day. He eventually switched his career goal to studying human sexuality in detail, primarily using the survey method.

Kinsey and his colleagues published the book entitled “**Sexual Behavior in the Human Male**” in the year **1948**. (A book on “**Sexual Behavior in the Human Female**” followed in **1953**.)

At the time Kinsey’s books were published, some of Kinsey’s findings were quite shocking to certain people. For example, Kinsey discovered that many married people were having intercourse much more often than every 2 weeks to 2 months. Kinsey also discovered that a majority of males and females in his survey samples admitted to masturbation (thereby calling into question the hypothesis that masturbation would lead to insanity, for if masturbation truly caused insanity – Kinsey’s studies would predict that the majority of people would suffer from insanity).

Many other surveys of human sexuality have been published in the years since Alfred Kinsey published his major books. Some surveys specifically collect information about certain groups or behaviors – for example teen sexual behavior and teen pregnancies – while other surveys try to collect information on a broad range of behaviors and attitudes in all subgroups of society. Some recent surveys have been designed very carefully to be as representative as possible of the major subgroups of our current society.

One important research study that is often referred to in the current literature of sexology is **The National Health and Social Life Survey (NHSLS)**. An analysis of the results of this survey was published in book form in **1994**. The survey collected information from 3,432 participants aged 18 to 59. White Americans, African Americans, and Hispanic Americans, were all well represented. Nonresponse was very low, with 79% of the selected subjects agreeing to participate. The findings of this study included the discovery that Americans are more content with their sex lives, less sexually active, and more sexually conservative than what was widely believed before the study results became available.

Another important recent study is **The National Survey of Sexual Health and Behavior (NSSHB)** published in **2010**. This survey collected information from 5,865 participants aged 14 to 94. This survey covered a broad range of sexual and sexual health related behaviors and is the most recent of the surveys to do so on such a large scale. One of the findings of this study was the discovery that many people tend to engage in numerous types of activities, (such as oral sex and coital sex), during a single sexual encounter.

Direct observation involves the researcher studying sexual behaviors by directly observing the behaviors using their own eyes, cameras, and various recording instruments.

One **advantage** of a researcher making direct observations (compared to subjects reporting their own behaviors) is that the possibility of the subject reporting inaccurately due to problems with memory, pride, or guilt, is largely eliminated. If the behavior is recorded on film, or digitally stored in some manner, it may be preserved and studied for long periods of time.

One **disadvantage** is that the subjects behavior may be altered under conditions of being observed compared to behavior that occurs in a more natural setting.

The most famous scientist pioneers in the use of the direct observation method to study human sexual behavior were **William Masters** and **Virginia Johnson**. Their book “**Human Sexual Response**” was published in **1966** and reported on

their observations of 382 women and 312 men who went through all the stages of sexual arousal while being observed during masturbation and intercourse.

Among the findings that Masters and Johnson reported in their book was that the vaginal tunnel (vaginal barrel) increased in size when a woman was sexually stimulated and also increased in size if an object was inserted into the vagina. They also discovered that the smaller penises as measured during the flaccid (limp) state, were likely to increase their size to a greater extent on stimulation, compared to penises that were already larger to start with, in the flaccid state.

The experimental method is used whenever a researcher attempts to alter the behavior of the subject by altering some aspect of the subject's environment.

The **independent variable** refers to the environmental condition that is under the control of the researcher who randomly assigns the subjects to experience one version of this condition or a different version of this condition. The **dependent variable** is the behavior exhibited by the subject on being exposed to the assigned condition, behavior that the researcher observes, and expects to vary from subject to subject, depending on the assigned condition.

An example of a study done using the experimental method would be a study that looks for a causal link between alcohol consumption and sexual arousal (in other words, a study that tries to determine if alcohol enhances or interferes with sexual arousal). If a researcher **randomly assigns** half of the subjects to drink a certain amount of alcohol, and the other half of the subjects to drink no alcohol – then the amount of alcohol consumed would be the **independent variable**. If the researcher then has all the subjects watch a sexually arousing movie while the changes in blood flow in their penises or vaginas are measured – to see if subjects under the influence of alcohol are more (or less) sexually aroused than their sober counterparts – the **dependent variable** would be the **amount of sexual arousal**.

One **advantage** of the experimental method is that it is particularly well suited to answer a certain type of question, namely, does some variable (being manipulated by the researcher), (at least partially) cause some behavior change that the researcher is interested in studying?

One **disadvantage** of the experimental method is that the artificially created laboratory environment may bias the behavior of the subject.

Tools that scientists use to observe sexual arousal while doing experimental research or direct observation research include:

(1) The **penile strain gauge** – which consists of a flexible loop that encircles the base of the penis.

When the penis enlarges during sexual arousal, the flexible loop is stretched, and a machine records the timing and amount of the stretching. In essence, the penile strain gauge records changes in blood flow into the penis. The penile strain gauge is used as an indicator of male sexual arousal.

(2) The **vaginal photoplethysmograph** – which consists of a tampon-shaped device that is inserted into the vagina and emits light. When the vaginal walls change in their ability to reflect light back to the device, because of changes in blood flow inside the vaginal walls during sexual arousal, a machine can record the differences in light returning to the device. In essence, the vaginal photoplethysmograph records changes in blood flow into the vagina walls. The vaginal photoplethysmograph is used as an indicator of female sexual arousal.

(3) The **vaginal myograph** – which consists of an instrument that can be inserted into the vaginal opening. When muscles of the pelvic floor are contracted they will tighten around the vaginal myograph. Muscles squeezing on the myograph will result in the creation of a record of the of the pelvic floor muscle activity.

(4) The **rectal myograph** – which consists of an instrument that can be inserted into the rectal opening. When muscles of the pelvic floor are contracted they will tighten around the rectal myograph. Muscles squeezing on the myograph will result in the creation of a record of the of the pelvic floor muscle activity.