

Milgram's experiment inflicted extreme emotional distress on its subjects and is now considered unethical and psychologically abusive by many. A similar psychological study would not be allowed today in most countries. The participants in this study, however, were later surveyed and 84% said they were "glad" or "very glad" to have participated while only 1% regretted their involvement.

Sampling Bias

Researchers can intentionally or unintentionally bias their study by the way in which subjects are selected. *Sampling bias* occurs when some individuals are more or less likely to be included in a study, and the result is a sample that is not random. Sampling bias can seriously distort the interpretation of study results and result in wrong or misleading conclusions. While most researchers take great care to avoid sampling bias, others have intentionally used biased samples to ensure that desired results were obtained.

Cherry Picking The report "Are Researchers Cherry Picking Participants for Studies of Antidepressants?" by the University of Pittsburgh Schools of the Health Sciences described findings from several clinical studies conducted for the purpose of gaining approval of antidepressants from the Food and Drug Administration. The report described how some common antidepressants do not help most patients with depression. Only a small percentage of depressed individuals met the criteria required for participation in the clinical trial, but the depressed individuals who qualified for the clinical trials had better outcomes from the drugs compared to other depressed individuals who did not qualify.

In this case, the criteria required to participate in the clinical trial created a sampling bias that favored the drug manufacturers who sponsored the research. (Changing the criteria to reduce sample bias could cause more patients to suffer serious side effects from the drugs. The lead author of the study recommended that the criteria not be changed. Instead, he suggested that medical care providers use their professional judgment in treating individual patients.)

Nonrespondent Bias Nonrespondent bias occurs when those who do not respond to a survey differ from those who do respond. Two aspects of a survey topic that affect responses are *salience* (whether or not the topic is of interest to the respondent) and *social desirability* (whether or not the topic is threatening or embarrassing to the respondent). One study found that when a topic has high interest to respondents, they were almost twice as likely to respond. Other studies have found that socially desirable behaviors like exercise and good nutrition are frequently overreported, while undesirable behaviors such as smoking are underreported.

Relative to alcohol research, several studies have shown that survey groups with higher proportions of heavy drinkers tend to have higher nonresponse rates. (See "Non-response Bias in a Sample Survey on Alcohol Consumption," by V. M. Lahaut et al., *Alcohol and Alcoholism*). Heavy drinkers are less likely to respond to a survey. For a survey related to alcohol consumption, heavy drinkers would likely be underrepresented and the results would be skewed. For a topic not related to alcohol consumption, however, underrepresentation of heavy drinkers might not distort results.

Interviewer Bias The manner in which a question is asked may affect the response. The author of this book recently received a survey in the mail asking the following questions:

- "Do you support the creation of a national health insurance policy that would be administered by bureaucrats in Washington, D.C.?"

Anonymity and Confidentiality

A survey is conducted with *anonymity* if the identities of the respondents are not known.

A survey is conducted with *confidentiality* if the identities of the respondents are not disclosed. Ideally, surveys should be both anonymous and confidential, but that isn't always practical or good. Confidentiality might be ignored if it is found that some respondents are a danger to themselves or others. In such cases, respondents should be informed with a statement such as this: "All of the information that you provide will remain confidential, unless it involves risks of serious danger to yourself or others."

The *National Observer* newspaper was discontinued, but it once hired a firm to conduct a confidential mail survey. The survey was conducted with the promise that "each individual reply will be kept confidential." One clever subscriber used an ultraviolet light to detect a code printed on the survey in invisible ink. Here, confidentiality was promised and observed, but anonymity was not promised and it was not maintained. Instead of using invisible ink, respondents should have been informed that their information was not anonymous.

