2. In each of the 824 different strata, one of the primary sampling units is selected so that the probability of selection is proportional to the size of the population in each primary sampling unit.
3. In each of the 824 selected primary sampling units, census data are used to identify a census *enumeration district,* with each containing about 300 households. Enumeration districts are then randomly selected.
4. In each of the selected enumeration districts, clusters of about four addresses (contiguous whenever possible) are randomly selected.
5. Respondents in the 60,000 selected households are interviewed about the employment status of each household member of age 16 or older.

This multistage sample design includes random, stratified, and cluster sampling at different stages. The end result is a very complicated sampling design, but it is much more practical and less expensive than using a simpler design, such as a simple random sample.

Part 2: Beyond the Basics of Collecting Data

In Part 2 of this section, we refine what we've learned about observational studies and experiments by discussing different types of observational studies and different ways of designing experiments.

There are various types of observational studies in which investigators observe and measure characteristics of subjects. The following definitions identify the standard terminology used in professional journals for different types of observational studies. These definitions are illustrated in Figure 1-4.

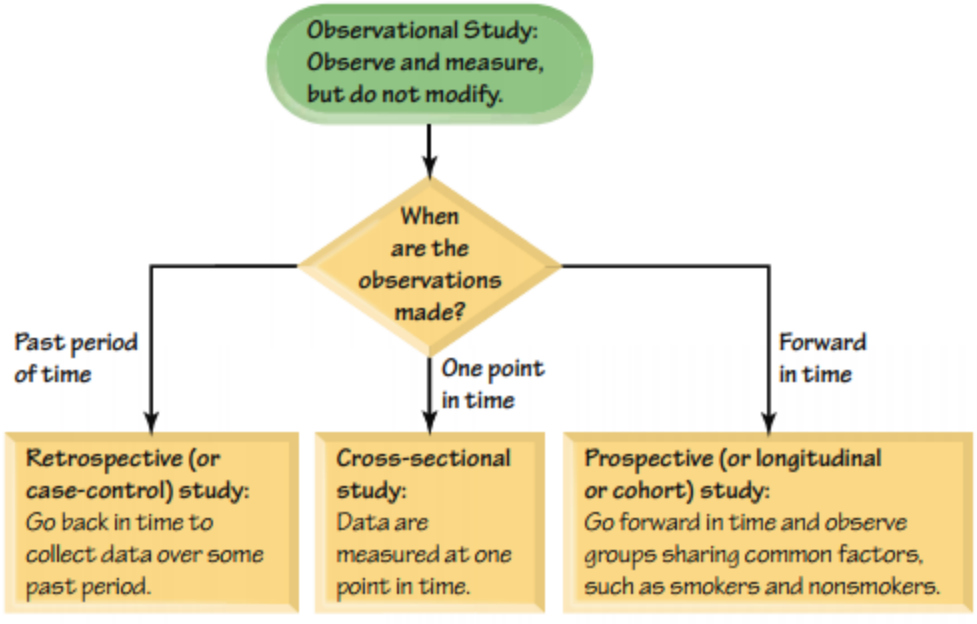

Figure 1-4 Types of Observational Studies

Prospective National Children's Study

A good example of a prospective study is the National Children's Study begun in 2005. It is tracking 100,000 children from birth to age 21. The children are from 96 different geographic regions. The objective is to improve the health of children by identifying the effects of environmental factors, such as diet, chemical exposure, vaccinations, movies, and television. The study will address questions such as these: How do genes and the environment interact to promote or prevent violent behavior in teenagers? Are lack of exercise and poor diet the only reasons why many children are overweight? Do infections impact developmental progress, asthma, obesity, and heart disease? How do city and neighborhood planning and construction encourage or discourage injuries?