

what we feel in the present. For example, retrospective reports by both adult alcoholics and their parents appear to greatly overestimate the frequency of childhood problems (Vaillant, 1995). People cannot report reliably the frequency and timing of many past events, from hospitalization to hours worked. However, retrospective data tend to be reliable when they concern major, persistent experiences in the past, such as what type of school someone went to or how a person's family was structured (Campbell, 1992).

In contrast, longitudinal research collects data at two or more points in time and, as such, data can be ordered in time. By measuring the value of cases on an independent variable and a dependent variable at different times, the researcher can determine whether variation in the independent variable precedes variation in the dependent variable.

In some longitudinal designs, the same sample (or panel) is followed over time. In other longitudinal designs, sample members are rotated or completely replaced. The population from which the sample is selected may be defined broadly, as when a longitudinal survey of the general population is conducted, or the population may be defined narrowly, as when members of a specific age group are sampled at multiple points in time. The frequency of follow-up measurement can vary, ranging from a before-and-after design with just one follow-up to studies in which various indicators are measured every month for many years.

Collecting data at two or more points in time rather than at one time can prove difficult for a number of reasons: lack of long-term funding, participant attrition, and so on. Quite frequently, researchers cannot or are simply unwilling to delay completion of a study for even one year in order to collect follow-up data. But think of the many research questions that really should involve a much longer follow-up period: Does community-oriented policing decrease rates of violent crime? What is the impact of job training in prison on recidivism rates? How effective are batterer treatment programs for individuals convicted of intimate partner assault? Do parenting programs for young mothers and fathers reduce the likelihood of their children becoming delinquent? It is safe to say that we will never have enough longitudinal data to answer many important research questions. Nonetheless, the value of longitudinal data is so great that every effort should be made to develop longitudinal research designs when they are appropriate for the research question being asked. The following discussion of the three major types of longitudinal designs will give you a sense of the possibilities (see Exhibit 6.12).

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