

■ **FIGURE 11.3** Depiction of cross-sectional, longitudinal, and retrospective research designs

Design Type	Depiction	Example
Cross-sectional	O_1	Data are collected at one point in time on several variables such as gender, income, and education.
Longitudinal	$O_1 \quad O_2 \quad \dots \quad O_n$	Data are collected in a forward direction over time on one or more variables such as gender (O_1), IQ (O_1), discipline problems in middle school (O_1), high school GPA (O_2) and dropout status (O_2).
Retrospective	$O_{T-n} \quad \dots \quad O_{T-1} \quad O_T$	Data are collected that represent present and past status on variables such as dropout (O_T), use of drugs (O_{T-1}), and GPA (O_{T-1}).

O stands for collection of data on independent variables, control variables, and/or dependent variables. n stands for the final time period data are collected for the longitudinal design, “T” stands for the current time, “T-1” stands for a time in the past, and “T- n ” stands for the beginning time point in the past examined in the retrospective design.