CONCOMITANT VARIABLE

A concomitant variable, or covariate, is a variable which we observe during the course of our research or statistical analysis, but we cannot control it and it is not the focus of our analysis.

Although concomitant variables are not given any central recognition, they may be confounding or interacting with the variables being studied. Ignoring them can lead to skewed or biased data, and so they must often be corrected for in a final analysis. Concomitant variables are also known as incidental variables or subordinate variables.

For Example, Let's say you had a study which compares the salaries of male vs. female college graduates. The variables being studied are gender and salary, and the primary survey questions are related to these two main topics. But, since salaries increase the longer someone has been in the workplace, the concomitant variable 'time out of college' has the potential to bias our data if it is not accounted for.

If this variable is observed, recorded for and accounted for in the final results, conclusions will be more valid. Typically this is done by noting the concomitant variable (here, age) in the initial data gathering, and then running a regression to 'equalize' all of the data points to the same number of years out of college.

Similarly, in a study comparing the effects of soil composition on the growth of tomatoes over 20 different locations country-wide, average temperatures and hours of sunlight available to each tomato patch would both be concomitant variables that would need to be included in a final analysis in order to get valid results.