

Confounding Variable

A confounding variable is something, other than the treatment being studied, that can affect the measured outcome of a trial. For example, imagine that a medicine to prevent the common cold is tested by administering it to 1,000 men, while a placebo is administered to a group of 1,000 women. The trial results show that far fewer men caught a cold during the trial period. It would not, however, be possible to conclude that the medicine had an effect because all of the placebo group were women, and therefore gender is a confounding factor. The trial results could have a plausible alternative explanation – for example, that women are more susceptible to the cold viruses circulating at the time of the study.

Well-designed trials take account of potential confounding variables and allow the elimination of plausible alternative explanations for study findings. In the example given above, men and women could be randomly assigned to the intervention and placebo groups to remove gender as a confounding variable.