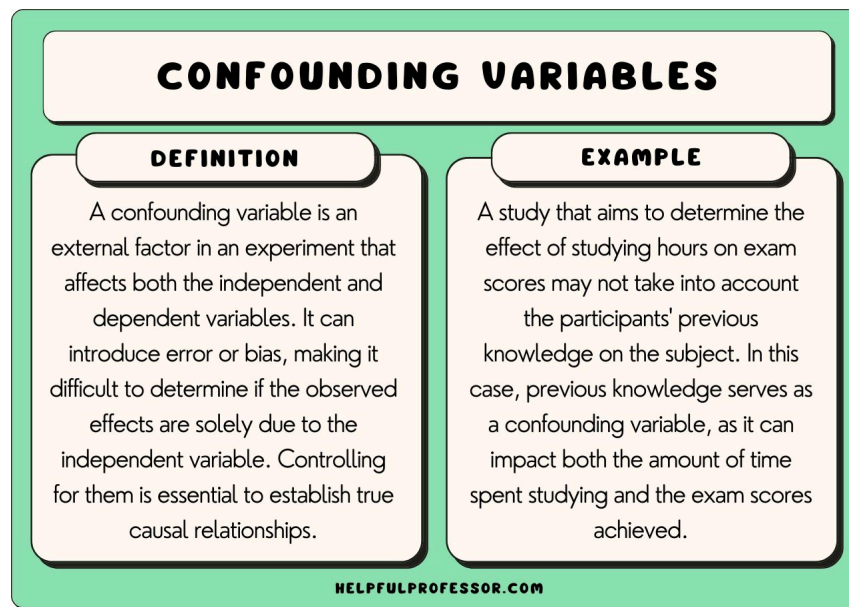




Confounding variables are outside factors (not the independent variable) that could influence the dependent variable in an experiment. They undermine research because if confounds are present, we can't be sure whether the independent variable actually caused the effect, or if the results were influenced by some other uncontrolled factor.

Directions: For each scenario, identify one possible confounding variable that could mess up the experiment.

1. A researcher tests whether drinking an energy drink before class improves memory by giving one group Red Bull and another group water before a recall test.

- Confounding Variable: _____

2. A psychologist wants to study whether listening to music while studying improves test performance. One group studies with music in the classroom, the other group studies in silence in the library.

- Confounding Variable: _____

3. An experiment compares two groups of students: one gets 8 hours of sleep, the other gets four hours, before a math test.

- Confounding Variable: _____

Teacher Key – Confounding Variables Warm-Up

1. Possible confounds: caffeine tolerance, prior sleep, time of day.
2. Possible confounds: location differences (classroom vs. library), noise distractions, student preferences for music.
3. Possible confounds: prior math ability, study habits, test anxiety, caffeine use.