1. A sports psychologist was interested in the mental health benefits of running, and predicted that running regularly would lead to fewer visits to see a psychological counselor. The sports psychologist got permission to obtain a list of all of the students at a nearby university, and information about how many times each student had visited the psychological counselor on campus. She also emailed all the students at the university a survey, asking the same 10 questions about their exercise habits, including running frequency.

Does this study have an experimental or correlational design?

|  |  |
| --- | --- |
| If this study is an experiment . . . | If this study is a correlational study . . . |
| * Independent variable: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | * Predictor: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| * Dependent variable: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | * Outcome: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

1. A heterosexual female college student was interested in how the color one wears influences romantic attraction. Every day for a semester she wrote down the color of her shirt, and how many males smiled at her or initiated conversation with her.

Does this study have an experimental or correlational design?

|  |  |
| --- | --- |
| If this study is an experiment . . . | If this study is a correlational study . . . |
| * Independent variable: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | * Predictor: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| * Dependent variable: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | * Outcome: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

1. A university administrator wants to know whether allowing alcohol at on-campus parties (for 21+ years olds) leads to more reports of sexual assaults than not allowing alcohol at on-campus parties. At the beginning of each of 20 academic years, she flips a coin to determine whether that year will be dry (no alcohol permitted) or not dry (alcohol permitted). The campus police already keep track of the number of sexual assaults reported each year.

Does this study have an experimental or correlational design?

|  |  |
| --- | --- |
| If this study is an experiment . . . | If this study is a correlational study . . . |
| * Independent variable: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | * Predictor: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| * Dependent variable: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | * Outcome: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

1. A father wanted to know whether giving his rambunctious three-year-old son sugary vs. non-sugary cereal in the morning influenced his son’s behavior in school, as measured by how many stickers his son earned from his teacher for good behavior. From September through December, the father randomly assigned each week to either the sugary or non-sugary cereal condition, and then counted the number of stickers his son received that week.

Does this study have an experimental or correlational design?

|  |  |
| --- | --- |
| If this study is an experiment . . . | If this study is a correlational study . . . |
| * Independent variable: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | * Predictor: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| * Dependent variable: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | * Outcome: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

**ANSWER KEY**

1. A sports psychologist was interested in the mental health benefits of running, and predicted that running regularly would lead to fewer visits to see a psychological counselor. The sports psychologist got permission to obtain a list of all of the students at a nearby university, and information about how many times each student had visited the psychological counselor on campus. Dr. V note: The sports psychologist *measured* mental health by recording for each student whether or not he/she visited the psychological counselor**.** She also emailed all the students at the university a survey, asking the same 10 questions about their exercise habits, including running frequency. Dr. V note: The sports psychologist also *measured* running frequency through asking participants questions on a survey.

Does this study have an experimental or correlational design? Correlational. Because both variables were measured, and neither was manipulated, this study is a correlational study. The researcher IS interested in cause and effect (as she believes running will cause lower frequency of visits to a counselor), but she did not actually run an experiment. Because she believes that running is the presumed cause and frequency of visits the presumed effect, she is treating running as the *predictor* and number of visits to the counselor as the *outcome.*

|  |  |
| --- | --- |
| If this study is an experiment . . . | If this study is a correlational study . . . |
| * Independent variable: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | * Predictor: **how often student runs** |
| * Dependent variable: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | * Outcome: **# visits to campus counselor** |

1. A heterosexual female college student was interested in how the color one wears influences romantic attraction. Every day for a semester she wrote down the color of her shirt, and how many males smiled at her or initiated conversation with her. Note that the description of the study doesn’t indicate anything about manipulating a variable. The student *measured* or recorded the color of shirt by writing down the color she happened to wear each day. It doesn’t say anything about randomly assigning each day a color, which means she just chose her outfits the way she usually did. She *measured* attraction by counting male smiles and initiation of conversation.

Does this study have an experimental or correlational design? Correlational. Because both variables were measured, and neither was manipulated, this study is a correlational study. She is interested in cause and effect, but does not run a true experiment. The predictor is the variable she believes is the cause and the outcome is the variable she believes is the effect.

|  |  |
| --- | --- |
| If this study is an experiment . . . | If this study is a correlational study . . . |
| * Independent variable: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | * Predictor: color of shirt |
| * Dependent variable: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | * Outcome: male smiles and initiation of conversation |

1. A university administrator wants to know whether allowing alcohol at on-campus parties (for 21+ years olds) leads to more reports of sexual assaults than not allowing alcohol at on-campus parties. At the beginning of each of 20 academic years, she flips a coin to determine whether that year will be dry (no alcohol permitted) or not dry (alcohol permitted). Dry vs. not dry was manipulated; she randomly assigned some years to be dry and other years to be not dry, to see whether dry vs. not dry influenced sexual assault reports. The campus police already keep track of the number of sexual assaults reported each year. Number of assaults was measured each year.

Does this study have an experimental or correlational design? Experimental. There is a randomly assigned IV (manipulated var).

|  |  |
| --- | --- |
| If this study is an experiment . . . | If this study is a correlational study . . . |
| * Independent variable: dry vs. not dry | * Predictor: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| * Dependent variable: number of sexual assaults | * Outcome: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

1. A father wanted to know whether giving his rambunctious three-year-old son sugary vs. non-sugary cereal in the morning influenced his son’s behavior in school, as measured by how many stickers his son earned from his teacher for good behavior. From September through December, the father randomly assigned each week to either the sugary or non-sugary cereal condition, and then counted the number of stickers his son received that week.

Does this study have an experimental or correlational design? Experimental, because he manipulated cereal type and used random assignment to conditions.

|  |  |
| --- | --- |
| If this study is an experiment . . . | If this study is a correlational study . . . |
| * Independent variable: sugary vs. non-sugary cereal | * Predictor: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| * Dependent variable: behavior, as measured by # of stickers | * Outcome: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |