# **Writing Testable Research Hypotheses**

In-Class Activity

Below, you will find two lists of variables that can be used to practice creating experimental and correlational hypotheses.

**For each new page (Pair #):**Pick one variable from each list, and then operationally define each of the variables you have selected in the Variables Table on the page you are using for that pair of variables. Next, complete the Hypothesis Table for that pair of variables by applying the operational definitions, identifying levels of the independent variable (for experimental approaches), selecting whether the hypothesis will be directional or non-directional, and then writing a complete hypothesis that applies each of the previous elements from that section of the table. You will use each pair of variables to construct two hypotheses, with one being an experimental hypothesis and the other being a correlational hypothesis.

Variable #1 Variable #2

Exercise Self-esteem

Sleep Anxiety

Diet Happiness

Social media usage Academic performance

Watching TV Social media popularity

Studying behaviors Driving performance

Spending habits Reading comprehension

Texting habits Anger

Caffeine consumption Memory performance

Volunteering habits Job satisfaction

Traffic conditions Physical strength

# **Pair #1**

## *Variables Table:*

|  |  |  |
| --- | --- | --- |
| **A.** | Choice from Variable #1 list (as written in list): |  |
| **B.** | Operationally-defined version of Variable #1 choice: |  |
| **C.** | Choice from Variable #2 list (as written in list): |  |
| **D.** | Operationally-defined version of Variable #2 choice: |  |

## *Hypothesis Table:*

|  |  |  |  |
| --- | --- | --- | --- |
| ***Experimental Approach*** | | ***Correlational Approach*** | |
| Operationally-defined independent variable  (box B): |  | First operationally-defined variable in correlation (box B): |  |
| Levels of operationally-defined independent variable: |  |
| Operationally-defined dependent variable (box D): |  | Second operationally-defined variable in correlation (box D): |  |
| Do you wish to make a directional or non-directional prediction? *(Circle one in the box at right.)* | Directional  Non-directional | Do you wish to make a directional or  non-directional prediction? *(Circle one in the box at right.)* | Directional  Non-directional |
| Experimental Hypothesis: |  | Correlational Hypothesis: |  |

# **Pair #2**

## *Variables Table:*

|  |  |  |
| --- | --- | --- |
| **A.** | Choice from Variable #1 list (as written in list): |  |
| **B.** | Operationally-defined version of Variable #1 choice: |  |
| **C.** | Choice from Variable #2 list (as written in list): |  |
| **D.** | Operationally-defined version of Variable #2 choice: |  |

## *Hypothesis Table:*

|  |  |  |  |
| --- | --- | --- | --- |
| ***Experimental Approach*** | | ***Correlational Approach*** | |
| Operationally-defined independent variable  (box B): |  | First operationally-defined variable in correlation (box B): |  |
| Levels of operationally-defined independent variable: |  |
| Operationally-defined dependent variable (box D): |  | Second operationally-defined variable in correlation (box D): |  |
| Do you wish to make a directional or non-directional prediction? *(Circle one in the box at right.)* | Directional  Non-directional | Do you wish to make a directional or  non-directional prediction? *(Circle one in the box at right.)* | Directional  Non-directional |
| Experimental Hypothesis: |  | Correlational Hypothesis: |  |

# **Pair #3**

## *Variables Table:*

|  |  |  |
| --- | --- | --- |
| **A.** | Choice from Variable #1 list (as written in list): |  |
| **B.** | Operationally-defined version of Variable #1 choice: |  |
| **C.** | Choice from Variable #2 list (as written in list): |  |
| **D.** | Operationally-defined version of Variable #2 choice: |  |

## *Hypothesis Table:*

|  |  |  |  |
| --- | --- | --- | --- |
| ***Experimental Approach*** | | ***Correlational Approach*** | |
| Operationally-defined independent variable  (box B): |  | First operationally-defined variable in correlation (box B): |  |
| Levels of operationally-defined independent variable: |  |
| Operationally-defined dependent variable (box D): |  | Second operationally-defined variable in correlation (box D): |  |
| Do you wish to make a directional or non-directional prediction? *(Circle one in the box at right.)* | Directional  Non-directional | Do you wish to make a directional or  non-directional prediction? *(Circle one in the box at right.)* | Directional  Non-directional |
| Experimental Hypothesis: |  | Correlational Hypothesis: |  |

# **Pair #4**

## *Variables Table:*

|  |  |  |
| --- | --- | --- |
| **A.** | Choice from Variable #1 list (as written in list): |  |
| **B.** | Operationally-defined version of Variable #1 choice: |  |
| **C.** | Choice from Variable #2 list (as written in list): |  |
| **D.** | Operationally-defined version of Variable #2 choice: |  |

## *Hypothesis Table:*

|  |  |  |  |
| --- | --- | --- | --- |
| ***Experimental Approach*** | | ***Correlational Approach*** | |
| Operationally-defined independent variable  (box B): |  | First operationally-defined variable in correlation (box B): |  |
| Levels of operationally-defined independent variable: |  |
| Operationally-defined dependent variable (box D): |  | Second operationally-defined variable in correlation (box D): |  |
| Do you wish to make a directional or non-directional prediction? *(Circle one in the box at right.)* | Directional  Non-directional | Do you wish to make a directional or  non-directional prediction? *(Circle one in the box at right.)* | Directional  Non-directional |
| Experimental Hypothesis: |  | Correlational Hypothesis: |  |