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DSO110 - Final Group Project

January 9, 2022

**Analysis Planning**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Evaluation Question** | **Independent Variable(s)** | IV Type & levels | Dependent Variable(s) | DV Type & levels | Analysis |
| In the Mega Millions, what are the optimal numbers to select in order to achieve a return on investment (ROI) | 5 Winning Main # | Categorical 70 levels | Frequency | Continuous | ANCOVA |
| Winning Mega Ball # | Categorical 25 levels |
| Prize levels | Categorical 9 levels |
| Does gender influence the likelihood of winning a jackpot? Does gender influence the likelihood of winning any prize? | Gender | Categorical  4 levels | Win or No | Categorical  2 levels | Independent Chi-Square |
| Do mixed groups win more overall than single sex groups/individual players? Do mixed groups win more jackpots than single sex groups/individual players? | Mixed group vs. single sex group/individuals | Categorical  2 levels | Win or No | Categorical  2 levels | Independent Chi-Square |

**Evaluation Question #1**

Do mixed groups win more overall than single sex groups/individual players? Do mixed groups win more jackpots than single sex groups/individual players?

In the Mega Millions, what are the optimal numbers to select in order to achieve a return on investment (ROI)

**Independent Variable(s)**

These variable(s) are causing something or creating an effect. List what each is and whether it is categorical or continuous. It is ok to only have one.

**Variable**

* Winning Numbers
  + Main Numbers and
  + Mega Ball
* Prize Levels

🗹 Categorical: # of levels \_Multiple □ Continuous

Dependent Variable(s)

These variable(s) are influenced by your independent variable and *depend* on them. List what each is and whether it is categorical or continuous. Unless they are related, you should have only one.

**Variable**

Frequency

□ Categorical: # of levels \_\_\_\_\_ □ Continuous

Now that you know the type and number of independent and dependent variables, you are ready to use the analysis flow charts to choose your analysis!

**Evaluation Question #2**

Does gender influence the likelihood of winning a jackpot? Does gender influence the likelihood of winning any prize?

**Independent Variable(s)**

These variable(s) are causing something or creating an effect. List what each is and whether it is categorical or continuous. It is ok to only have one.

**Variable**

Gender

🗹 Categorical: # of levels \_\_4\_\_\_ □ Continuous

Dependent Variable(s)

These variable(s) are influenced by your independent variable and *depend* on them. List what each is and whether it is categorical or continuous. Unless they are related, you should have only one.

**Variable**

Win or No

🗹 Categorical: # of levels \_\_2\_\_\_ □ Continuous

Now that you know the type and number of independent and dependent variables, you are ready to use the analysis flow charts to choose your analysis!

**Evaluation Question #3**

**Independent Variable(s)**

These variable(s) are causing something or creating an effect. List what each is and whether it is categorical or continuous. It is ok to only have one.

**Variable**

Mixed group vs. single sex group/individuals

🗹 Categorical: # of levels \_\_2\_\_\_ □ Continuous

Dependent Variable(s)

These variable(s) are influenced by your independent variable and *depend* on them. List what each is and whether it is categorical or continuous. Unless they are related, you should have only one.

**Variable**

Win or No

🗹 Categorical: # of levels \_\_2\_\_\_ □ Continuous

Now that you know the type and number of independent and dependent variables, you are ready to use the analysis flow charts to choose your analysis!