

Correlation & Prediction Worksheet

Part 1: Analysis - Correlation

Use the Cereals File

What's the strength of the relationship between sugar content and rating?

Check linearity
Obtain PPMC
Interpret

Convert average rating to ordinal data with 3 categories of similar size

What's the relationship between shelf and the ordinal version of rating?

Cramer's V
Interpret via crosstab

Part 2: Analysis - Correlation

Use the hoola data file

Is there a relationship between gender and transfer status?

Obtain Phi
Interpret

Is there a relationship between gender and transfer status?

Part 3: Analysis - Correlation

Use the Calcium file

What's the relationship between treatment group and systolic blood pressure after the 12 week treatment?

Do Point Biseal by hand

$$r_{pb} = \frac{\bar{X}_1 - \bar{X}_0}{S_{x(avg)}} \sqrt{P_1(P_0)}$$

Will need from PASW: Standard deviations, proportions, Means

Interpret based on comparison of means/medians

Part 4: Analysis - Prediction

Use the Cereals file

Obtain the prediction equation you would use to predict rating from calories per serving.

Check linearity

Obtain PPMC, means, and standard deviations

Write out formula

$$\hat{y} = r_{xy} \left(\frac{S_y}{S_x} \right) (x - \bar{X}) + \bar{Y}$$

What would the SEE be for predicting rating from calorie content?

Interpret

Predict what the rating would be for a new cereal with 95 calories per serving