# **Linear Regression**

### Model Fit Measures

|       |       |                |                         | Ove     | rall M | odel Te | est    |
|-------|-------|----------------|-------------------------|---------|--------|---------|--------|
| Model | R     | R <sup>2</sup> | Adjusted R <sup>2</sup> | F       | df1    | df2     | р      |
| 1     | 0.885 | 0.784          | 0.776                   | 103.395 | 2      | 57      | < .001 |

### Omnibus ANOVA Test

|                    | Sum of Squares | df | Mean Square | F      | р      |
|--------------------|----------------|----|-------------|--------|--------|
| age                | 45.757         | 1  | 45.757      | 42.059 | < .001 |
| english score      | 13.555         | 1  | 13.555      | 12.460 | < .001 |
| Residua <b>l</b> s | 62.012         | 57 | 1.088       |        |        |

*Note.* Type 3 sum of squares

## Model Coefficients - label

| Predictor     | Estimate | SE    | t      | р      |
|---------------|----------|-------|--------|--------|
| Intercept     | -1.501   | 0.524 | -2.866 | 0.006  |
| age           | 0.345    | 0.053 | 6.485  | < .001 |
| english score | 0.179    | 0.051 | 3.530  | < .001 |

# **Assumption Checks**

### Durbin–Watson Test for Autocorrelation

| Autocorrelation |        | DW Statistic | р     |  |
|-----------------|--------|--------------|-------|--|
|                 | -0.208 | 2.396        | 0.130 |  |

## **Collinearity Statistics**

|               | VIF   | Tolerance |
|---------------|-------|-----------|
| age           | 2.322 | 0.431     |
| english score | 2.322 | 0.431     |

# Normality Test (Shapiro-Wilk)

| <br>Statistic | р     |
|---------------|-------|
| 0.975         | 0.261 |