Haroon Popal

Assignment #2

1. 1. Bivariate correlation

|  |  |  |  |
| --- | --- | --- | --- |
|  | AngAffect\_Unadj | Friendship\_Unadj | LifeSatisf\_Unadj |
| AngAffect\_Unadj | 1.00 | -0.29 | -0.35 |
| Friendship\_Unadj | -0.29 | 1.00 | 0.37 |
| LifeSatisf\_Unadj | -0.35 | 0.37 | 1.00 |

* 1. Compute by hand

|  |  |  |
| --- | --- | --- |
| Statistic | AngAffect\_Unadj | Friendship\_Unadj |
| *Sr* | -0.253 | 0.283 |
| *Pr* | -0.270 | 0.304 |
| *B* | -0.264 | 0.295 |
| *b* | -0.290 | 0.299 |

* 1. Compute with R

|  |  |  |
| --- | --- | --- |
| Statistic | AngAffect\_Unadj | Friendship\_Unadj |
| *Sr* | -0.253 | 0.283 |
| *Pr* | -0.273 | 0.302 |
| *B* | -0.264 | 0.295 |
| *b* | -0.290 | 0.299 |

* 1. Compute with SPSS Partial

|  |  |  |
| --- | --- | --- |
| Statistic | AngAffect\_Unadj | Friendship\_Unadj |
| *R* | -0.273 | 0.302 |
| *r2* | 0.123 | 0.138 |
| *Sr* | -0.253 | 0.283 |
| *sr2* | 0.064 | 0.080 |
| *Pr* | -0.273 | 0.302 |
| *pr2* | 0.075 | 0.091 |
| *B* | -0.264 | 0.295 |
| *b* | -0.290 | 0.299 |

1. In a hierarchical multiple regression, we examined the incremental prediction of life satisfaction (LifeSatisf\_Unadj) from angry affect (AngAffect\_Unadj), angry hostility (AngHostil\_Unadj), and a score of friendship (Friendship\_Unadj). Model results were examined for evidence of heteroscedasticity and normality of residuals. We did not find strong evidence of deviation from these assumptions, as the mean of the residuals was 0, the predictor variables and the residuals were not correlated, and skewness, kurtosis, and heteroscedasticity were all normal. The variables were however, moderately correlated with each other (Table 1)

Table 2 shows the results of the hierarchical regression. The first step in the model accounted for 12.2% of the variance in life satisfaction (*F*(1, 1203) = 167.598, *p* < .01. Angry affect (AngAffect\_Unadj) was associated with life satisfaction (b = -0.38, SE = 0.03, *t* = -12.95, *p* < .001). The second step of the model accounted for a total of 20.2% of the variance in life satisfaction (*F*(2, 1202) = 152.282, *p* < .01) and this was a significant increase in variance accounted for in the model (*F*(1, 1202) = 127.57, *p* < .001). Angry affect and friendship were both significantly associated with life satisfaction (b = -29, SE = 0.03, *t* = -9.82, *p* < .001, b = 0.298, SE = 0.03, *t* = 10.97, *p* < .001, respectively). The third step of the model accounted for a total of 24.8% of the variance in life satisfaction (*F*(3, 1201) = 132.025, *p* < .01) and this was a significant increase in variance accounted for in the model (*F*(1, 1201) = 73.213, *p* < .001). Angry affect, friendship, and angry hostility were all significantly associated with life satisfaction (b = -0.19, SE = 0.03, *t* = -6.20, *p* < .001, b = 0.24, SE = 0.03, *t* = 8.63, *p* < .001, b = -0.262, SE = 0.03, *t* = -8.56, *p* < .001).

**Table 1. Bivariate correlations of variables**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | AngAffect\_Unadj | Friendship\_Unadj | AngHostil\_Unadj | LifeSatisf\_Unadj |
| AngAffect\_Unadj | 1.00 | -0.29 | 0.44 | -0.35 |
| Friendship\_Unadj | -0.29 | 1.00 | -0.35 | 0.37 |
| LifeSatisf\_Unadj | 0.44 | -0.35 | 1.00 | -0.41 |
| AngHostil\_Unadj | -0.35 | 0.37 | -0.41 | 1.00 |

**Table 2. Life Satisfaction Hierarchical Regression**

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | *Dependent variable:* |  |
| (1) | LifeSatisf\_Unadj (2) | (3) |
| AngAffect\_Unadj Friendship\_Unadj AngHostil\_Unadj  Constant | -0.383\*\*\* (0.030)  72.784\*\*\* (1.444) | -0.290\*\*\* (0.030)  0.298\*\*\* (0.027)  53.304\*\*\* (2.247) | -0.192\*\*\* (0.031)  0.236\*\*\* (0.027)  -0.262\*\*\* (0.031)  64.974\*\*\* (2.574) |
| Observations | 1,205 | 1,205 | 1,205 |

R2 0.122 0.202 0.248

Adjusted R2 0.122 0.201 0.246

Residual Std. Error 8.635 (df = 1203) 8.236 (df = 1202) 8.000 (df = 1201)

F Statistic 167.598\*\*\* (df = 1; 1203) 152.282\*\*\* (df = 2; 1202) 132.025\*\*\* (df = 3; 1201)

*Note:* \*p<0.1; \*\*p<0.05; \*\*\*p<0.01