

Computations You Should be Able to Perform.

The following are results from a validation study done by undergraduates. They were looking at the relationship between five scales in the *Activity Vector Analysis* (AVA) scales and the Recklessness scale taken from Cloninger's *Temperance and Character Inventory*. The five AVA scales are Assertiveness (V-1), Sociability (V-2), Calmness (V-3), Conformity (V-4), and Conscious Restraint (V-5). It was predicted that there would be a negative relationship between Calmness (V-3) and Recklessness. It was also thought that there would be a complex relationship between the AVA vectors but it was not known what this relationship would be.

Table 1. Descriptive Statistics

	Mean	Std. Deviation	N
Recklessness(1)	19.79	3.99	102.00
SCV1	45.81	9.69	96.00
SCV2	46.51	9.49	96.00
SCV3	48.40	10.76	96.00
SCV4	52.18	13.06	96.00
SCV5	46.26	9.67	96.00

Table 2. Correlations

		Recklessness(1)	SCV1	SCV2	SCV3	SCV4	SCV5
Recklessness(1)	Correlation	1.000	-.061	.124	-.283	-.025	-.247
	Sig. (1-tail)	.	.277	.114	.003	.405	.008
	N	102	96	96	96	96	96
SCV1	Correlation	-.061	1.000	.520	.388	.412	.670
	Sig. (1-tail)	.277	.	.000	.000	.000	.000
	N	96	96	96	96	96	96
SCV2	Correlation	.124	.520	1.000	.455	.435	.433
	Sig. (1-tailed)	.114	.000	.	.000	.000	.000
	N	96	96	96	96	96	96
SCV3	Correlation	-.283	.388	.455	1.000	.294	.640
	Sig. (1-tail)	.003	.000	.000	.	.002	.000
	N	96	96	96	96	96	96
SCV4	Correlation	-.025	.412	.435	.294	1.000	.287
	Sig. (1-tail)	.405	.000	.000	.002	.	.002
	N	96	96	96	96	96	96
SCV5	Correlation	-.247	.670	.433	.640	.287	1.000
	Sig. (1-tail)	.008	.000	.000	.000	.002	.
	N	96	96	96	96	96	96

Table 3. Model Summary, Stepwise Regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.283	.080	.070	3.9425
2	.401	.160	.142	3.7862

a Predictors: (Constant), SCV3

b Predictors: (Constant), SCV3, SCV2

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	24.948	1.863		13.390	.000
	SCV3	-.107	.038	-.283	-2.857	.005
2	(Constant)	21.224	2.181		9.733	.000
	SCV3	-.162	.041	-.428	-4.008	.000
	SCV2	.137	.046	.319	2.988	.004

a Dependent Variable: Recklessness(1)

- How many people completed the AVA?
Answer: 96
- Which AVA variables are significantly correlated with Recklessness?
Answer: SCV3 and SCV5
- Was the basic research hypothesis supported? Why or why not?
Yes, there was a negative relationship with V3 and the composite multiple regression results showed that both V3 and V2 were related to Recklessness.
- Using 'eyeball' statistics does there appear to be evidence for multicollinearity among the predictors?
Not really, none of the variables is related with an r greater than .80.
- What variable was selected in the first step of the stepwise regression? Why was this variable entered first?
V3, it had the highest first order correlation with Recklessness.
- What is R?
.401
- What variables were entered in the second step?
V-2
- How much additional variability was added in the second step?

8% (.16 - .08)

9. What is the standard error of R?
3.7862