Research Methods

Correlation

JASP Examples __

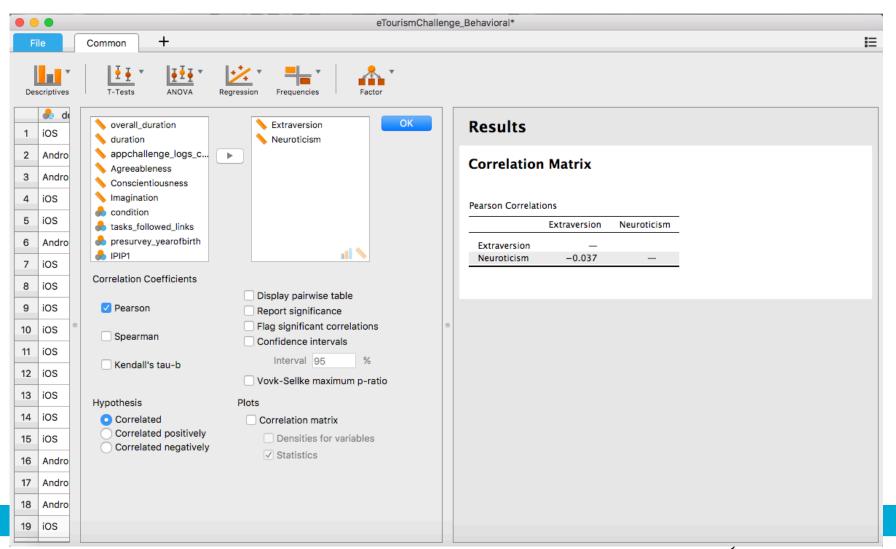
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❖ Below you find Pearson's r for the relationship between Extraversion and Neuroticism. How do you assess the valence and magnitude of the correlation?



In JASP



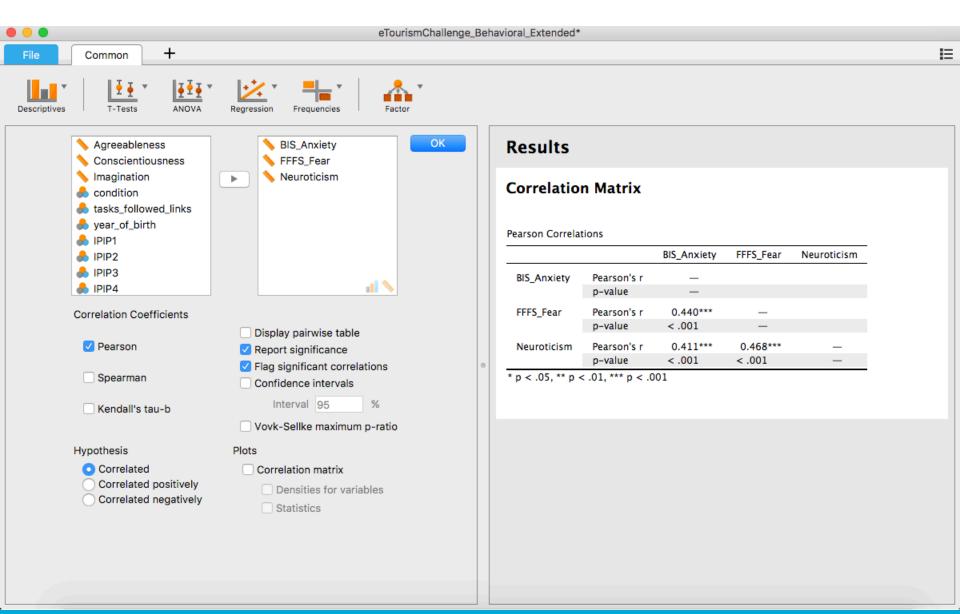


- ❖ Valence = The correlation is negatively valenced (r = minus 0.037)
- * Magnitude = The correlation is weak, almost none. This happens when r is between $\pm .00$ and $\pm .29$. The r = -0.037 falls within that range.



On the next slide, you'll find the JASP correlation matrix for the variables BIS_Anxiety, FFFFS-Fear, and Neuroticism. How do you assess the relationship between these three variables?







- FFFS & BIS = The correlation is positive, of moderate magnitude (r = 0.440) and significant (p < .001) --> the variables relate to each other (H_a accepted)
- Neurot. & BIS = The correlation is positive, of moderate magnitude (r = 0.411) and significant (p < .001) --> the variables relate to each other (H_a accepted)
- Neurot. & FFFS = The correlation is positive, of moderate magnitude (r = 0.468) and significant (p < .001) --> the variables relate to each other (H_a accepted)



- On the next slide, you find a bigger correlation table. It contains bivariate relationships between many variables. Some of those are Big Five sub-dimensions: Extraversion, Agreeableness, Conscientiousness, Neuroticism, Imagination
- According to personality theory, Extraversion and Agreeableness positively relate to each other (as they both are social components of personality).
- Do you find support for this idea in the correlation table? Please explain.



Correlation Matrix

Pearson Correlations

		BIS_Anxiety	FFFS_Fear	Extraversion	Neuroticism	Agreeableness	Conscientiousness	Imagination
BIS_Anxiety	Pearson's r	_						
	p-value	_						
FFFS_Fear	Pearson's r	0.440***	_					
	p-value	< .001	_					
Extraversion	Pearson's r	-0.026	-0.029	_				
	p-value	0.743	0.716	_				
Neuroticism	Pearson's r	0.411***	0.468***	-0.037	_			
	p-value	< .001	< .001	0.644	_			
Agreeableness	Pearson's r	0.160*	0.113	0.267***	-0.018	_		
	p-value	0.046	0.162	< .001	0.820	_		
Conscientiousness	Pearson's r	0.042	-0.007	-0.037	-0.017	0.009	_	
	p-value	0.603	0.928	0.644	0.833	0.915	_	
Imagination	Pearson's r	-0.088	-0.024	0.187*	-0.067	0.160*	0.107	_
	p-value	0.274	0.764	0.019	0.405	0.045	0.184	_

^{*} p < .05, ** p < .01, *** p < .001



Extraversion & Agreeableness = Their correlation is positive, of weak magnitude (r = 0.267) and significant (p < .001) --> the variables, indeed, positively relate to each other (H_a accepted)



- According to some assessment psychologists, Conscientiousness and Imagination positively relate to each other (as they both are dimensions of intellect).
- Do you find support for this idea in the big correlation table (above)? Please explain.



* Conscientiousness & Imagination = Their correlation is positive, of weak magnitude (r = 0.107) and nonsignificant (p = .184) --> the variables do not relate to each other (H_0 accepted, H_a rejected)

